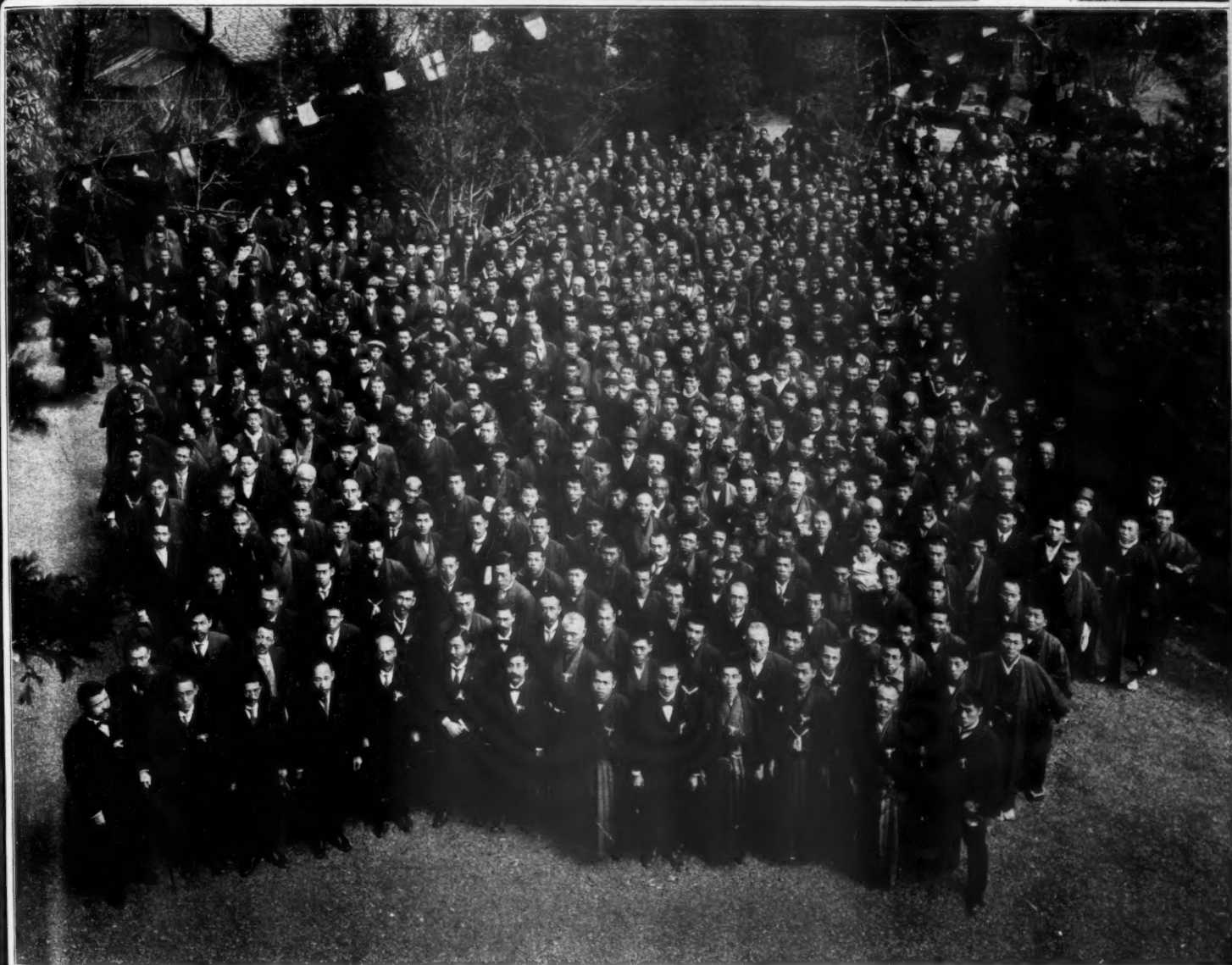


# AMERICAN BEE JOURNAL

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OCTOBER

1912



## Members Present at the Second Meeting of National Japanese Bee-Keepers' Association

This meeting was held at the Gifu Legislative Assembly Hall, Gifu City, Japan, April 23, 1912. Mr. Iwata, the editor of the Japanese bee-magazine, "The Friend of Bee-Keepers," informs us that the meeting was presided over by Mr. Y. Nawa, of the Nawa Entomological Laboratory, and was attended by about six hundred bee-keepers.

# American Bee Journal



PUBLISHED MONTHLY BY

**American Bee Journal**

1st Nat'l Bank Bldg. Hamilton, Illinois

## IMPORTANT NOTICE

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THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec12" on your label shows that it is paid to the end of December, 1912.

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Best No. 1 sections, 1000, \$4.00; 2000, \$7.60. Plain, 25c less. Best white pine Hives with supers, \$1.25; 10-fr., \$1.50. 24 lbs. 2-inch glass shipping-cases, 15c. Mother-wort seed, per package, 10c, postpaid. Catalog free.

**H. S. DUBY, St. Anne, Ill.**

## Southern Bee-Keepers!

I have a Large and Complete Stock of BEE-SUPPLIES at **Cordele, Ga.**, and have erected a large Warehouse and filled it with New Bee-Supplies at **O'Brien, Fla.**, near Live Oak, the best shipping-point for all sections of Florida, Southeast Georgia and Southern Alabama.

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Please mention Am. Bee Journal when writing.

## FAMOUS QUEENS DIRECTLY from ITALY BEES MORE BEAUTIFUL, MORE GENTLE, MORE INDUSTRIOUS, THE BEST HONEY-GATHERERS

2nd Universal Exposition, St. Louis, Mo., 1904, highest award.

Extra Breeding Queens, \$3; Selected, \$2; young, fertilized, \$1.50; lower prices, per doz., 50 or 100 Queens. Safe arrival guaranteed. Write **Anthony Biaggi**, Pedeville, near Bellinzona, Italian Switzerland.

This country, politically, Switzerland Republic, lies geographically in Italy, and possesses the best kind of bees known.

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for fall sowing, both yellow and white bloom; new crop now ready. Best legume fertilizer, good pasture and hay. Price and circular, how to grow it, free. Also Kentucky blue-grass seed. **John A. Sheehan**, Falmouth, Ky.

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## BEE - KEEPER'S NOVELTY POCKET - KNIFE.



Your Name and Address will be put on one side of the handle as shown in the cut, and on the other side a picture of a Queen-Bee, a Worker-Bee, and a Drone-Bee. The handle is celluloid, and so transparent, through which is seen your name. If you lose this Knife it can be returned to you, or it serves to identify you if you happen to be injured fatally, or rendered unconscious. The cut is the exact size; it is made of best steel. When ordering be sure to write exact name and address. Knife delivered within two weeks after we receive order.

Price, postpaid, \$1.00; or with a year's subscription to the American Bee Journal—both for \$1.80; or given FREE as a premium for sending us 3 New subscriptions at \$1.00 each.

**American Bee Journal, Hamilton, Illinois.**

## SURE, Old Combs are Valuable

IF SHIPPED TO US FOR RENDERING

## We Extract 99½ Percent of Wax

And then Pay you Highest Market Prices, or 2 cents additional in Trade

## YOU CAN'T APPROACH THAT FOR PROFIT

We need great quantities of Comb and Extracted Honey  
Write us

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"The Busy Bee-Men"

204 Walnut Street,

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## HONEY FOR SALE

### By the National Bee-Keepers' Association

Beginning in September, we are arranging a card record of every member of our Association who has honey for sale. This record will tell the amount of honey he has, what kind, how put up, and the price f. o. b. his station. Buyers who are in need of honey, whether in ton or car lots, will do well to write us stating their wants. We will then refer you direct to the bee-keeper having what you want, and the deal will be made direct between you and him.

## NO CHARGE FOR THIS INFORMATION

Not one cent will be charged you for this. Our object is to widen the distribution of honey, bring buyer and producer closer together, place each particular kind of honey in the market that demands it, and thus assist the producer in getting a better price.

## OTHER BENEFITS

We have furnished our members, this year, with standard tin packages for extracted honey. Hundreds of dollars worth have been sold, and buyers are coming back for their second and third orders. This tells you the satisfaction they are giving. Are also handling glass packages.

## THE BEE-KEEPERS' REVIEW

This is now the official organ of the Association. Send in One Dollar now, and get the Nov. and Dec. numbers free. The Dollar will apply on your 1913 subscription. When you get the "Review," look up the list of Branches, and send 50c to the nearest one. This total of \$1.50 will entitle you to full National and Branch benefits, together with a subscription to the "Review" to the end of 1913. We now have 23 National Branches in almost as many different States. Let us help you sell your honey. Address,

**The National Bee-Keepers' Association**

**E. B. TYRRELL, Sec., 230 Woodland Ave., Detroit, Michigan**



**George W. York**  
**Sandpoint,**  
**Bonner County**  
**Idaho**



### A Big Bargain—Must Sell

A friend of mine here has 10 acres,  $3\frac{1}{4}$  acres under cultivation, bal. excellent celery land; large 3-room house with closet, bath-room, kitchen-sink, and built-in features in kitchen; woodshed and 20 h. p. boiler under it; greenhouse 16x20 feet, stocked; abundance of springs with best of water; 2 horsepower gasoline engine.  $1\frac{1}{2}$  miles from Sandpoint, and two other towns within  $1\frac{1}{2}$  miles.  $\frac{1}{4}$  acre in strawberries, bal. in garden-truck. Good market for all that can be raised. Fine location for bees and poultry, also. Cost \$4500 four months ago; will sacrifice \$500 if sold at once. Terms,  $\frac{1}{4}$  down, balance on or before 5 years. Write quick if you want a good thing. Address the undersigned, as I would like to help my friend who, on account of other business, will sacrifice as stated. I consider it a fine opportunity to get an established business and home.

### Untested Italian Queens

The kind I have furnished for years—the rest of the season at these prices: 1 for 75c; 3 for \$2.10; 6 for \$4.00; or 12 for \$7.50.

### Some Special Offers

American Bee Journal one year (\$1.00) with either "First Lessons in Bee-Keeping" (50c), or Doolittle's "Scientific Queen-Rearing" (50c), for only \$1.00; or the American Bee Journal a year with **both** of the books mentioned—all postpaid for only \$1.40.

If you prefer, you can have Gleanings in Bee Culture for a year instead of the American Bee Journal in the above special offer; or, if you want both books and both bee-papers, send \$2.20.

Send for my **free** Circular of other special offers.

### White Sweet Clover Seed

I have a quantity of White Sweet Clover Seed in Chicago, Ill., which I will sell at the following low prices so long as it lasts, all orders to be sent to me here at Sandpoint, Idaho:

5 lbs. for 80c; 10 lbs. for \$1.50; 25 lbs. for \$3.50; 50 lbs. for \$6.50; or 100 lbs. for \$12.00.

If wanted by freight, add 25c for cartage on your order.

While I make the handling of bee-literature a specialty, I also take subscriptions for general magazines. Write me what you would like in the way of bee-papers, bee-books, etc., and I will be glad to quote you some attractive prices. Address,

**George W. York,**

**Publisher and Subscription Agent,**  
**302 S. Boyer Ave.,**

**Sandpoint, Bonner Co., Idaho**

Please mention Am. Bee Journal when writing.

## Untested Italian Queen-Bees

### Our Standard-Bred

**6 Queens for \$4.50 ; 3 for \$2.50 ;  
 1 for 90 cents.**

For a number of years we have been sending out to bee-keepers exceptionally fine Untested Italian Queens, purely mated, and all right in every respect. Here is what a few of those who received our Queens have to say about them:

GEORGE W. YORK & Co.:—The two queens received of you some time ago are fine. They are good breeders, and the workers are showing up fine. I introduced them among black bees, and the bees are nearly yellow now, and are doing good work.  
 Nemaha Co., Kan., July 15.

A. W. SWAN.

GEORGE W. YORK & Co.:—After importing queens for 15 years you have sent me the best. She keeps 9 1-2 Langstroth frames fully occupied to date, and, although I kept the hive well contracted, to force them to swarm, they have never built a queen-cell, and will put up 100 pounds of honey if the flow lasts this week.  
 Ontario, Canada, July 22.

CHAS. MITCHELL

GEORGE W. YORK & Co.:—The queen I bought of you has proved a good one, and has given me some of the best colonies.  
 Washington Co., Va., July 22.

N. P. OGLESBY.

GEORGE W. YORK & Co.:—The queen I received of you a few days ago came through O. K. and I want to say that she is a beauty. I immediately introduced her into a colony which had been queenless for 20 days. She was accepted by them, and has gone to work nicely. I am highly pleased with her and your promptness in filling my order. My father, who is an old bee keeper, pronounced her very fine. You will hear from me again when I am in need of something in the bee-line.  
 Marion Co., Ill., July 13.

E. E. McCORM.

We usually begin mailing Queens in May, and continue thereafter on the plan of "first come first served." The price of one of our Untested Queens alone is 90 cents, or with the old American Bee Journal for one year—both for \$1.60. Three Queens (without Journal) would be \$2.50, or 6 for \$4.50. Full instructions for introducing are sent with each Queen, being printed on the underside of the address-card on the mailing-cage. You cannot do better than to get one or more of our fine Standard-Bred Queens.

**American Bee Journal, Hamilton, Illinois.**

## MARSHFIELD GOODS

### BEE-KEEPERS:—

We manufacture Millions of **Sections** every year that are as good as the best. The **CHEAPEST** for the Quality; **BEST** for the Price. If you buy them once, you will buy again.

We also manufacture **Hives, Brood-Frames, Section-Holders and Shipping-Cases.**

Our Catalog is free for the asking.

**Marshfield Mfg. Co.,**

**Marshfield, Wis.**

# Continental Cans

are Cans of quality, manufactured in the most up-to-date can factory in the World by expert can makers who, from many years of practical experience, know how. You cannot afford to overlook us when placing your can business.

## We Make a Specialty of Friction Top and other Cans for Honey

carrying a large stock of same in our Chicago factory for prompt shipment.

### LARGEST INDEPENDENT CAN MAKERS IN EXISTENCE

Factories at Chicago, Syracuse, Baltimore and Canonsburg, Pennsylvania. Write for prices.

## Continental Can Company

Sales Office: No. 72 West Adams Street, Chicago, Illinois.

## If BEES could TALK

THEY WOULD SAY:

## "GIVE US DADANT'S FOUNDATION

It's Clean. It's Pure. It's Fragrant.

It's just like the Comb we make ourselves."

If you are not using "Dadant's Foundation" drop us a card and we will give you prices, or tell you where you can get it near you—

**Agents Everywhere.**

**DADANT & SONS,  
HAMILTON, ILL.**





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C. P. DADANT, Editor.  
DR. C. C. MILLER, Associate Editor.

HAMILTON, ILL., OCTOBER, 1912

Vol. LII---No. 10

## EDITORIAL COMMENTS

### Fertilized Queens and Virgins

Mr. Doolittle, in his article in the present number, calls attention to the treatment of queens by the bees. We might add to what he says that fertilized queens which are laying are much better cared for by the bees than virgins. In a fair season a dozen laying queens may be kept in cages on the same comb and they will all be fed, while virgins would be neglected.

The better prepared a queen is to lay eggs the better the treatment she will receive. That is why queens transferred from one colony to another in the same apiary without lingering in cages are better and more quickly accepted than queens which have traveled, and whose ovaries are therefore in poorer shape for prompt laying.

### Bee-Keeping in Schools

More and more bee-keeping is claiming recognition as a branch of agriculture that should have its place in a complete course of study, especially in country schools. According to the account of the Irish Bee Journal, the Education Committee of the Staffordshire County Council stands well in the lead in this matter. Bee-keeping of a very practical sort has been introduced into 8 of its country schools. Each school has 2 colonies of bees, one to be tinkered with constantly to show to the children what goes on in a hive, the other to be left undisturbed so as to do its best at honey storing.

The teachers are instructed by the first-class expert and lecturer, Mr. J. Tinsley, with the "Practical Bee Guide" of Editor J. G. Digges as a text-book, and have shown great interest. Each school is supplied with a smoker and 10 bee-veils. It was thought that the children would be somewhat afraid of the bees, but, on the contrary, the teachers find it is more trouble to hold

them back, as they exhibit no fear whatever.

Note also elsewhere what Tunis is doing. Why are not these examples worthy of general imitation in this country?

### Middleman's Profit

In this number will be found another article on the above-named subject by Mr. Fehleisen, in reply to Mr. Foster. The Editor does not accept responsibility for articles from any one. However, in this case, we wish to say that Mr. Foster does not propose to do entirely away with the middleman, but to get producer and consumer more nearly together and reduce the cost of disposing of our honey, which has always been too great. But the business of the middleman is just as legitimate as any other. His labors should be rewarded.

As to the possibility of graft and subsidy in the prospective parcels post, it can never equal the graft and overcharges of the express companies. We should have domestic parcels post at least as cheap as international postage.

### Weed-Tasters for Kansas

"Weed-tasters are to be employed soon by the Kansas Agricultural College. The men will give their chief attention to sweet clover, especially in the western half of the State. Their task is to find the sweetest patches, the really sweet, for use in propagating the plant where it is most needed for feed."

"The determination to employ weed-tasters was decided June 14, in a meeting of the Board of Regents. It grew out of the fact that sweet clover will thrive on alkali ground in the extreme western part of Kansas. It is very similar to alfalfa, and yields from 3 to 5 tons an acre every year. It grows wild in many places, and farmers are beginning to cultivate it. There is a difference, however, in the clover plants, so, for this reason, men are to try to find as much as possible of the really sweet clover."

The foregoing, from the Country

Gentleman, is an item under the general heading, "The Advance of Agriculture." It surely does seem an advance to those of us who have known what a bitter warfare has been waged against sweet clover as a noxious weed. When intelligent agricultural advance allows sweet clover to come into its own, the bee-keeper will be glad to share in the advantage.

### What Becomes of the Drones?

When forage becomes scarce in the fall we may get our first intimation of it by seeing the workers chase the drones about the entrance. On opening the hive we may find the drones huddled together disconsolately in a group outside the combs, and in a few days they are gone. They may be found lying dead in front of the hive, or they may disappear without leaving any trace. The same thing may occur even while forage is still plenty in a colony where a young queen has just begun laying, and there is no apparent need of drones for another year.

Now what becomes of the drones? It is a common thing to say that the workers kill them, but do they? In Root's "A B C and X Y Z" we find this: "I do not know that I ever saw bees sting drones, but they sometimes pretend to do so. I rather think it is only a feint to drive them away." Others tell us that drones cannot live upon honey and bee-bread as it is to be had from the combs, but depend upon the workers feeding them partly-digested food; so when drones are no longer desired the workers withhold the food and they starve. It looks as if it might be that way. You probably have seen workers feeding drones, and have seen drones act as if asking for food. Upon lifting a comb out of the hive it is a common thing to see the workers dip their heads into the cells to load up with honey. Did you ever see a drone do that?

If workers really sting drones to death, it ought not to be a difficult thing to see it. You have likely often seen a worker sting another worker, and you know that death occurred in a very few seconds. You have seen workers acting as if stinging a drone,

## American Bee Journal

but did not the drone always get out of the way in apparently good health. Did you ever see a drone curl up dead very shortly after being stung?

The matter may not be one of great practical importance, but it is well to know the truth. If workers do not sting drones to death it is just as well to stop saying so.

### Breeding for Improvement

While some hold that the bee is perfect of its kind, with no possibility of improvement, there are others who are quite hopeful in the matter. Among these is Geo. B. Howe, who has written a series of very interesting articles for the Bee-Keepers' Review. Even as to the matter of non-swarming he takes an optimistic view. To those who have some belief that a non-swarming strain of bees is among the possibilities, the following passage will give aid and comfort:

"We surely will never get non-swarming bees until we use queen mothers that have a record of not swarming; also using drones of the same strain. The incubator will not help in the least, nor will artificial-reared queens help about breeding non-swarming bees. But you will have to breed and rear your queens from colonies not given to swarming. I have had one experience which has greatly encouraged and strengthened my belief in breeding for non-swarming.

"I had a queen, No. 116, I reared about 50 daughters from her, and not one of them ever swarmed. I had some of those queens four seasons, and I never found a larva or egg in a queen-cell. I would have had more of those queens, but they were too cross. If I had known what I know now, I would have given them a better trial. I learned right there, even if a queen or colony was quite cross and not gentle to handle, it paid to breed from her, as I find that we sometimes get our most gentle colonies from them; that is, if we have the right drones to mate with them."

Note that the first thing is a careful record. Whether it be to breed for non-swarming or for a big crop of honey, a permanent record should show just exactly what has been done, with some expectation that whatever has been done may be, at least to some extent, repeated in future generations. If Mr. Howe had not thus kept track of every colony, he would have failed of that remarkable record of 50 daughters that never swarmed.

But it must be expected, according to Mr. Howe, that there will be lapses. After breeding for six years he thought he had a practically non-swarming strain. Then in the seventh year he was disgusted to have them swarm for a couple of days, as if they were possessed. But he now thinks that is just what he should have expected, for it was an *unusual* season, and was reported one of the worst seasons on record for swarming.

He discontinued breeding from that remarkable strain because of its bad temper, but thinks if he had continued he might have struck a gentle streak in them. The question arises whether one is not likely to get bad temper along with desirable qualities. Is it not likely to be the case that a colony which shows great industry at storing is at the same time industrious at stinging? Yet older bee-keepers who changed from blacks to Italians will recall that in the change from the former to the latter the gain in temper was as great as the gain in industry? This again raises the question whether

the Americanized Italians are as gentle as those imported years ago.

### Disposing of the Honey

FRIEND DADANT:—I desire information on the best way of disposing of a crop of some 1500 pounds of extracted honey and about 300 pounds of comb honey. I desire to ship it, but do not know where. I wrote to..... in Chicago, and he has offered to sell it for me upon 10 percent of commission. What do you think of it? Where will I be likely to get the best price? The year has been good for my bees, and I wish to make as much from my crop as possible. I started the season with 36 colonies, and now have 97, so you see that I have had a very fair result.

ILLINOIS.

The best method to follow in selling a crop of honey of the size mentioned, is to advertise it among your neighbors. By letting people know that you have a good crop and letting them sample it whenever occasion offers, you

mission man, whose name you mention, is very reliable, and will get you the best possible price for your honey. But you must remember that your product thus comes in competition with that of thousands of others, that you have to pay freight on it and commission, and that it will pass through the hands of at least two middlemen before it reaches the consumer who may be living next door to you. There may be also an additional freight to pay from the large city before it reaches the consumer who may be living next door to you. There may be also an additional freight to pay from the large city before it reaches the place of consumption.

In many instances bee-keepers have shipped their honey away and have witnessed the sale, in their own town groceries, of honey from away. So



ESSAYS ON BEES AND BEE-KEEPING, MANOUBA, TUNIS.—(See page 205.)

can dispose of a large amount, provided your price is reasonable.

An apiarist of Indiana, Mr. John C. Bull, at the Chicago-Northwestern convention last winter, explained how he sold thousands of pounds of honey directly to consumers, by going around with a sample can, from house to house, and offering each housekeeper a taste of it. That is the best and most profitable way of selling your honey. You may sell it to retailers also, at a little less price than to consumers, say 10 or 12 percent less. After your trade is once established, future sales will be easier.

The next best way to sell honey is to advertise it in the bee-journals. There are always bee-keepers whose crop is short, or who have sale for more than they produce. A few lines in the "want ads" cost but very little, and are sure to bring enquiries.

The third method of procedure is the method you have thought of, shipping to commission merchants in the large cities. It is the most expeditious, but it is also the least profitable. The com-

mission man has paid freight and commission to get rid of the honey and some other bee-keeper, in a far away locality, has done the same thing, both losing a part of the profit in the transaction.

Of course, there are localities where so much honey is produced that it cannot be sold in the vicinity. In such places it becomes necessary to ship it away to the commission man. But one ought to make very sure that one's market is overloaded before doing so, and one must not blame the commission man if he cannot secure as good prices as could have been had if we retailed our product at home.

Remember also that honey does not sell well until cool weather has come and fresh fruit is partly out of the way.

### Honey in Pollen-Bags

The honey-bee is an object of universal interest, and penny-a-liners frequently take it as an object upon which to give information, and almost invariably serve up as facts something



## American Bee Journal

so far from the truth as to be absurd. The latest instance to hand is perhaps the limit. The Irish Bee Journal quotes as follows:

"Capture in an airy box with a little honey a bee whose pollen-bags contain honey. Give opportunity for a good look at it, noting body, wings, legs, antennae, and, if possible, its tongue. Do not at present explain pollen-bags."

How's that? It is not taken from the column of jokes in a funny paper. It appears in a school paper under the head of "A Nature Talk" on "Bees as Busy Workers," and appears in all seriousness to be intended as instruction to teachers in public schools as to how they shall talk to the children. Among those who read that school paper some will be amused and some will be mad.

### Uniform Grading Rules

Secretary Tyrrell is putting up a good fight for a uniform set of grading rules for the whole country. This is a big country, and pasturage and conditions vary greatly throughout its length and breadth. What is considered honey of best flavor in one part of the country is not looked upon with favor in another. Yet even so, there are enough points in common to make it worth while to set up a standard with regard to those points to which honey anywhere in the country should conform.

Take the matter of density in ex-

tracted honey. Immense harm has been done to the honey market by the watery, unripe stuff that has been put upon it by unscrupulous—more often ignorant—producers. Let a certain standard of so many pounds to the gallon be set as the least density to be allowed, and it is not impossible that in time even the most ignorant might learn to conform to that standard.

In the matter of comb honey the correspondence published in the Bee-Keepers' Review shows a wide diversity of opinion among bee-keepers. One will admit in No. 1 what another will admit only in No. 2. One will admit in the lowest class what another will condemn as culls and unmarketable. No matter what the flavor, there may be an agreement that in a certain class there must not be more than so many unsealed cells. And so with regard to other points. There can be—there should be—a getting together and agreeing, just so far as this is possible. Secretary Tyrrell is the right man to take the lead in this matter, and all bee-keepers should second his efforts.

### Three Editors for the Review

The Bee-Keepers' Review now flings to the breeze at its masthead as its corps of editors E. B. Tyrrell, Managing Editor, with E. D. Townsend and Wesley Foster as Associate Editors. That's a strong team, and ought to do good work.

They also make plaster casts shaped over rolled mats. After the plaster is dry, the mat is easily removed, to be used again. They have even hived bees in drain tiles of the proper size, and the author cites an instance where a pioneer settler had imported a lot of 10-inch tiles which disappeared gradually from his premises. He was unable to ascribe any cause to this occurrence until one day, during the course of a wild-boar hunt, away from his immediate vicinity, he discovered his tiles, carefully piled on a hillside, constituting the hives of a magnificent and prosperous apiary.

In the mountains of Kef, and south of Sidi-Bouزيد, they hive the swarms in holes dug in the ground on a hillside. The hole, made of proper depth and length, is covered with parallel stems of thuya, a native, sweet-smelling sort of juniper. With a few guides fastened to the underside of these stems, they serve, like the top-bars of our frames, as comb bearers. The whole thing is covered with flat stones, or earth and grasses. The author calls this bee-keeping by the name of "troglodyte." It will astonish no one to read of such underground habitations for bees, since the mountains inhabited by "troglodyte" human beings are to be found only a few miles to the south of the Tunis protectorate.

The natives appear to believe that bee-pasturage may be pointed out to their colonies, and for this purpose they enclose a number of bees from their apiary in some sort of closed receptacle and carry them to fields of blossom at a distance, where they release them, claiming that in this way the bees are directed to crops which they might entirely miss. (?)

Apiaries of 500 colonies are common,

## MISCELLANEOUS



## NEWS ITEMS

**Bibliography.**—"La Tunisie Apicole" (Apiculture in Tunis), by J. Georges, Chevalier du Mérite Agricole, President of the Tunis Bee-Keepers' Association. A volume of 224 pages, with numerous engravings, maps and tables of statistics of bee-culture and its products in Tunis. Price, 3,25 francs (65 cents).

Mr. Georges is a young pioneer of Tunis, a professor educated at the Tunis Normal School, backed by the French Departments of Agriculture and of Education of this colony.

His acquaintance with native conditions of apiculture is thorough. His first chapter is devoted to a description of the methods and the hives in use by the natives from time immemorial.

The Tunis hive, or "djeba," is a cylinder similar to those in use in Asia Minor and a part of the Orient. It is from 8 to 12 inches in diameter, and 4 to 5 feet in length. Driving 6 or 8 stakes into the ground, the native interweaves through them flexible switches of willow, reeds, and sometimes wires or twisted straw. After the weaving is finished, the tube is covered with a mortar made of wet clay and cowdung, which is afterwards dried in the sun. The circular openings at the extremities are closed with disks made of straw and mud, in the same way, one of the end disks having a notch for the entrance.

In districts where the cork-oak is



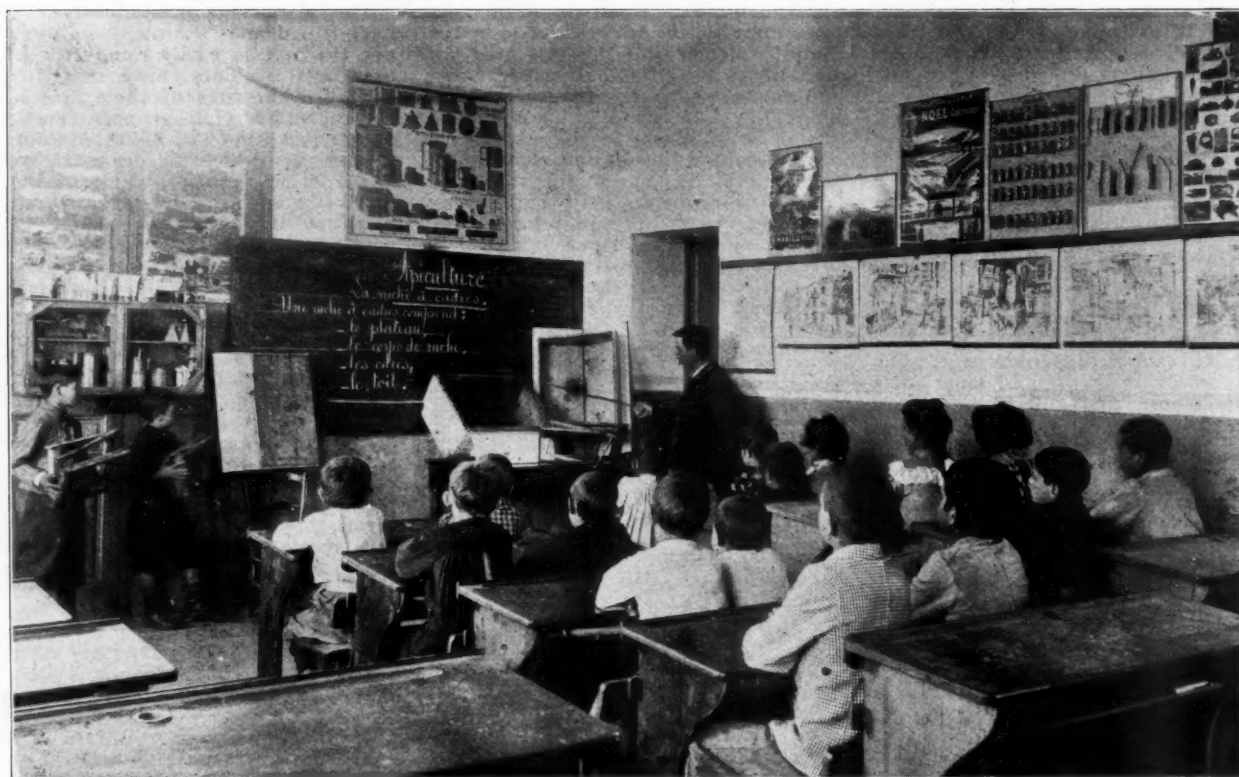
A LESSON IN BEE CULTURE—SUN-EXTRACTING OF BEESWAX—MANOUBA, TUNIS.

plentiful, a roll of bark is peeled off a medium-size tree and the split edges are coarsely sewed together. A disk of cork from the same tree closes the ends. The male cork-tree is not fit for industrial uses, and is used for this purpose on account of its low value. In localities where wood is scarce, they use such vegetable fibers as dwarf palm, etc.

and the hives are piled in rows, in tiers of three and four, then covered with straw, hay or weeds to protect them from the direct rays of the sun. Thorny bushes are used to fence away marauders who are numerous.

The queen-bee is called "sultan," or king, and the drones "berra," or mules. The queen-cells, which we compare to

# American Bee Journal



BEE-HIVES AND IMPLEMENTS AT THE SCHOOL OF VILLEJACQUE, TUNIS.

an inverted acorn-cup, are by them called "olives."

Migrating bee-culture is sometimes practiced, and the bees are then carried on camel-back.

Thyme honey is most in demand on account of its flavor. The honey of the islands of Galite and Pantellaria, in the Mediterranean, is especially renowned because of the profuseness of this plant in those volcanic islands.

Foul brood is frequent, but its ill-effects are said to be lessened and its cure made easier by the gathering of the fragrant and aromatic nectar of thyme, rosemary and eucalyptus.

The Tunis bees are smaller than our common bee. They are of a cross disposition, but well fitted for the sudden changes of climate of Tunis. They are so numerous that swarms take possession of any crevices or hollows, and have even been known to enter the globes of the street lamps of Tunis.

The statistics show a total of 10,426 bee-keepers in Tunis, all but 636 of them being natives. The number of hives of bees given is 220,142, of which only 7,280 are modern hives with movable frames. The total production of honey in 1909 was 2,500,000 pounds; beeswax, 253,000 pounds.

The honey-producing surface of Tunis, deducting waste land and lakes, is estimated at 7,260,000 acres. Less than half of this area supports as many bees as might be kept.

The most interesting portion of the above-named book is the chapter on apiarian teachings at the primary schools. The Bee-Keepers' Association was organized in 1901, but in 1903 there was but little practical bee-cul-

ture followed as yet. School teachers were urged to learn and practice bee-culture. In 1904, only 4 school teachers in Tunis were bee-keepers and able to teach bee-culture. In 1910, their number had increased to 105. The book contains two photographs of apiarian school-rooms, one for the theory, the other for the practice in handling frames, foundation, sections, etc. Tunis is evidently coming to the front, and this book will do much good.

**Bee-Culture in Oregon.**—An enquiry having been made by us into the state of bee-culture in Oregon, we have received the following reply from the Secretary of the State Bee-Keepers' Association:

*Dear Sir:*—In answer to your letter, I will say that we have a regular course in bee-culture, and also a course for the farmers' short course during the winter.

Eastern Oregon is by far the best bee-keeping section of the State, for the reason that most of the farmers grow alfalfa. In the Rogue River Valley about Medford, there is a limited territory where there are probably 1500 to 2000 colonies. I understand about 30 tons of honey will be shipped from there this fall. In the Willamette Valley, and the rest of western Oregon, very little honey is produced for the reason that there are no large fields of alfalfa.

The State Board of Agriculture has introduced a division of bees, and I hope to see an exhibit there this fall for the first time. Mr. Frank E. Meredith, of Salem, Oreg., is the secretary, and I am certain that he will be glad to send you a premium list if you will write to him. Very truly yours,  
Corvallis, Oreg., Aug. 15. H. F. WILSON.

**Bonner County, Idaho.**—We are in receipt from friend York of the Bonner County Fair premium list. In this list, the bees are recognized to the extent

of \$20 in premiums, besides several premiums in donations. Friend York is the Superintendent of this department.

**Bees Which Visit Only One Species of Flowers.**—The Popular Science Monthly for August contains a very interesting article from the pen of John H. Lovell, of Waldoboro, Maine, with the above-named heading. It refers to varied numbers of insects belonging to the same order as our honey-bee, and incidentally to the honey-bee itself. We quote a few passages:

"When a female bee, in gathering pollen for brood-rearing visits but one kind of flower, it is termed a monotropic bee, or if only a few allied species an oligotropic bee; but if it visits many flowers it is called a polytropic bee. These terms were first proposed by Dr. Loew, and signify adapted to one, few or many flowers.

"The oligotropic habit is not beneficial to flowers, it concerns the bees alone. The oligotropic bees are almost without exception solitary forms, to which there are no flowers specially adapted. The social bees, as a rule, visit a great variety of flowers, though in Europe it is stated that there is a bumble-bee (*Bombus gerstaeckeri*) which visits a single species of monkshood (*Aconitum lycoctonum*). Here, of course, the adaptations are mutual. This mode of flight, however, has not in general been determined by floral adaptations. Certain species of bees have become satellites of certain flowers because of the advantage thus gained for themselves, and partly also, perhaps, as the result of habit. Just as there are fly-flowers, butterfly flowers and bumble-bee flowers, so, on the other hand, there are willow bees, golden-rod bees, a pickerel-weed bee, a loose-strife bee, a violet bee, and a strawberry bee.

"Two most important influences are the season of the year and the length of time the bee is on the wing. It is clear that bees which fly only in spring or autumn for about a month, have not a great choice of flowers. Usually the length of time an oligotropic bee flies, and the flower it visits in bloom are about the same. The honey-bee is prac-



# American Bee Journal

tically a monotropic bee at certain seasons of the year. While the basswood and white clover are in bloom, the honey-bee visits these flowers almost exclusively. Again in the fall, in Maine, it confines its attention solely to the golden-rods. In California, at times, it collects nectar exclusively from the sages; in Michigan from the willow-herb, and in other regions from other plants. If from any one of these plants it also obtained its supply of pollen, and was on the wing only while it was in bloom, it would be regarded as a monotropic bee in the strict sense of the word. That it exhibits a strong tendency, when collecting pollen, to be constant to one plant species is well known; and the little packets of pollen it brings into the hive seldom consist of two kinds of pollen. But, when a bee flies from spring until fall, and requires a large amount of stores, it is evident that it can never become oligotropic.

**Horsemint Honey.**—By the kindness of my friend, Prof. Wilmon Newell, I have received a liberal sample of honey from horsemint (*Monarda punctata*). Horsemint is widely distributed, but is especially at home in Texas, and there does its most important work as a honey-plant. So I was interested in the sample, and especially so as it was put up in the style of the famous bulk-comb honey so popular in Texas.

The sample was of the June flow, put up in a Simplex glass jar, containing

piece. In larger vessels the comb is supposed to be twice as much as the extracted.

It does seem to me that a thorough search over a State as large as Texas ought to have resulted in finding a better name than bulk-comb honey. That name can appropriately apply to something that is all comb honey, but hardly to that which is from a third to two-thirds extracted.

The flavor of horsemint honey is quite pronounced. Those who sampled it agreed that it had a good taste, but a little too strong. The sampler said, "I like it better than clover honey it; has a richer flavor." That same sampler prefers buckwheat to clover. So what one calls rank another calls rich. Where a pronounced flavor is favored, it is easy to believe that horsemint honey should be popular.

After writing the foregoing I sent a copy of it to Prof. Newell. A response from him showed that I didn't know all that was to be known about honey down Texas-way. I might make corrections according to the new light received, but Prof. Newell's letter is so interesting and full of instruction that I prefer to make no corrections, but

extracted varies with the individual bee-keeper, but, for my part, I advocate the filling of the pail or can with comb honey, after which the extra space is filled with extracted, for the principal purpose of keeping the comb from mashing down—which it will most certainly do if there is no extracted in with it. Most of the bee-keepers, however, do not fill the cans full of comb, but only from one-half to three-fourths full, in order that they may get full weight into the cans. A 60-pound can, for example, will not weigh fully 60 pounds if filled full of comb and then extracted added. However, honey should be sold by net weight, regardless of how it is packed or what the container is.

Am sorry you got the impression that I was sending you a sample of "bulk-comb" honey. Not so, I was just sending a sample of "horsemint honey," and the proportion of comb and extracted was purely *happstance*.

If you don't like the term "bulk comb," you might adopt one that we heard of a short time ago, away back in the sticks—in the big woods, to be explicit. The term was "slug honey," and the appellation is synonymous with "bulk-comb honey."

Sincerely yours,

WILMON NEWELL.

**Bees Versus Roses.**—Some time ago, quite a discussion was brought about by the assertion of Gaston Bonnier, president of the French Central Bee-Keepers' Association, that one never saw bees upon roses, no matter how colored or how fragrant. Dr. Miller replied that he had often seen them upon the Crimson Ramblers, and that they even tore the buds open.

The magazine "L'Abeille de l'Aube," in its August number, quotes the different assertions which were made upon the subject since then, in Europe.

Mr. Bonnier came back with the assertion that the bees were only hunting for pollen, as, according to him, there is no nectar in roses.

Jean Huppin, of Fontenay-Aux-Roses, saw his bees take pollen on the roses, but never any nectar.

A. Martinot saw the bees often on the Crimson Ramblers and other simple roses, never on the double flowers.

F. Pitrat believes they find both honey and pollen on the simple flowers.

Louis Rosseil, Consul of Belgium in Athens, says that in the island of Euboea, the bees work upon fields of roses, and produce a white honey much esteemed.

**Unicuique Suum.**—Under the above proverb, L'Apicoltura Italiana, of Ancona, Italy, in its August issue, asks who is the discoverer of "enforced fasting" for the cure of foul brood. Dr. Cesare Colantoni quotes his own letters to L'Apicoltore, in date of 1896, showing that he supported this method of treatment of the disease as early as 1882.

We had the curiosity of looking up the records to find the earliest method of cure in the United States. Langstroth, in 1857, gave in his book the following from a German apiarist, whom he does not name:

"Drive out the bees into a clean hive and shut them up in a dark place without food for 24 hours; prepare for them another clean hive fitted up with combs from healthy colonies, transfer the bees into it, and feed them with pure honey."

This was not fully the fasting system, but a little later Quinby, in his "Mysteries of Bee-Keeping," 1866, page 219, says:

"All the bees should be driven into an empty hive. If it is desirable to put them in



A LESSON IN EXTRACING HONEY, MANOUBA, TUNIS.—(See page 295.)

about  $\frac{1}{2}$  of a pint, or a pound of honey. The general appearance was to me displeasing, for it took me back to the days when the sight of a piece of comb honey resting in a liquid was a sure sign that the liquid was nothing but glucose. But that isn't fair to bulk-comb honey, for the days of such adulteration are past and gone, and the average consumer—indeed, the producer of today—sees only a beautifully clear honey of light amber, containing a piece of comb honey that appears a bit lighter still.

I didn't think to weigh the liquid and comb separately, but the mouth of the jar is of such size that it admits, without crushing, a piece of comb honey about a third as large as the contents of the jar. But by crushing the corners one could squeeze in a larger

print his letter, even if it does show up that I don't know as much as I thought I did. Here is the letter:

COLLEGE STATION, TEX., Aug. 24, 1912.  
DR. C. C. MILLER, Marengo, Ill.—

Dear Dr. Miller:—I have your very kind letter of the 20th and copy of your note on the horsemint honey, prepared for the American Bee Journal. I gave you a wrong impression about the packing of that bit of honey. I placed it in a Simplex jar because that was the right size for a sample, and I put in both comb and extracted because I wanted you to see both; but I certainly never intended to give the impression that that was the way they pack bulk-comb honey in Texas, or that the proportion of extracted and comb in that jar was any indication of the proportion which ordinarily holds in the packing of bulk-comb honey.

I have never seen any bulk-comb honey put up for the general market in glass jars, and while it may be done, certainly the number of Texas bee-keepers that put up bulk comb in glass—as a regular practice—must be very scarce. It is invariably in tin pails or cans. The proportion of comb to

# American Bee Journal

a hive containing comb, they may be transferred to it after they have been in an empty one long enough to consume all the honey they have carried with them."

E. P. Abbe, of Massachusetts, in September, 1879, reported in the American Bee Journal for that year, page 450, that he successfully practiced the confining of bees until they had used up all their honey, as a cure for foul brood; L. C. Whiting, in the National convention of that year made a similar report.

It was probably at this meeting that the attention of D. A. Jones, of Canada, was drawn to the "starvation method," which resulted in its being adopted by Canadian apiarists and becoming known as the "McEvoy cure." Many of us have read about it, but so many different methods were claimed as successful that but little attention was paid to it by the general public until the 90's.

Schirach is said to have been the first man to try this method and succeed.

**Comb Honey.**—Farmers' Bulletin No. 503, of the Department of Agriculture, has been sent to us by Dr. E. F. Phillips, to whom we extend our thanks. This bulletin was written by Geo. S. Demuth, Apicultural Assistant. It is quite exhaustive, contains 48 pages and 20 illustrations, some of which are original.

In perusing this work we notice that Mr. Demuth lays stress upon what we consider a very important point in honey-production, too often neglected. It is the necessity of securing the force of workers at the proper time for the honey-flow, building up the colony early enough, providing sufficient stores and available brood-space, preserving the heat of the brood-nest, etc. There are also most judicious instructions for preventive measures in regard to swarming. Three pages are devoted to caring for the crop.

The bulletin may be obtained free by addressing the Secretary of Agriculture, Washington, D. C.

**Northern Illinois and Southern Wisconsin Meeting.**—The annual meeting of the Northern Illinois and Southern Wisconsin Bee-Keepers' Association will be held in the Court House at Rockford, Ill., on Tuesday, Oct. 15, 1912. All those interested in bee-keeping are cordially invited to attend.

B. KENNEDY, Sec.

2507 W. State St., Rockford, Ill.

**A New Cage for Shipping Bees.**—The Editor received, from Mr. E. R. Root, Sept. 13, a 3-pound cage of bees, of which we give cuts, both full and empty. The cage was accompanied by a letter, stating that experiments were being made of shipping bees in hot weather without combs, for migratory bee-keeping. A tin water bottle and vertical wooden slats are the principal new points of this method. The bees came through in splendid shape, but the hot weather had just abated, and the temperature at the time when the bees were received was only about 65 degrees. But as there were not more

than a dozen dead bees in the cage, and the swarm was apparently contented and had ventilation all around, it is our opinion that this method will prove a success in almost any kind of summer weather, and our thanks are heartily extended to Mr. Root for his judicious experiment. It cannot fail to be useful to bee-keepers all over the country.

**Judges Kansas Exhibit.**—Mr. C. P. Dadant was judge of the honey-exhibit of the Kansas State Fair at Hutchinson, Kan., Sept. 18. The exhibit was very fine. An account of it will be given in our next number.

**Fire at Cincinnati.**—A fire destroyed a part of the F. W. Muth Co.'s stock of honey and supplies Sept. 10, but Mr. Muth reports that most of the loss was covered by insurance, and that they will suffer but little in consequence of this. They are moving to 204 Walnut Street.

**Illinois Bee-Keepers to Meet.**—The Illinois State Bee-Keepers' Association will hold its annual meeting at the State House in Springfield Oct. 30 and 31, 1912. Matters of importance to the bee-keepers of the State will be discussed, and a large attendance is expected.

## BEE-KEEPING FOR WOMEN

Conducted by MISS EMMA M. WILSON, Marengo, Ill.

### Not Afraid of Bees

We have received the following letter and photograph from Mr. J. C. Mosgrove, of Medina, Ohio:

Will you permit mere man to contribute something for your page in the Bee Journal. The enclosed photograph was taken in my apiary. The young lady shown never had a



OH, PSHAW! WHO'S AFRAID?

frame of bees in her hands before, but she had the grit to hold it and pose for her picture.

### The Value of Honey as a Food

We do not as yet begin to realize the wonderful food that the bees offer us in their honey, and no child is apt to overeat it, owing to its cloying nature. In Germany the intelligent housewife uses honey in her cakes, puddings and gingerbread, not only because she thus

finds a more economical and healthful substitute for sugar, but also for the reason that the bees fill the honey with a natural preservative that keeps cakes fresh for an indefinite period. In fact, the Germans use honey in their salad-dressing, which not only gives it a delicious flavor, but it has also been found that it satisfies the child's craving for sweets so that he has no desire for any subsequent dessert.—*Ladies' Home Journal*.

### Queer Doings of Bees

Bees are freakish things. Sometimes they seem to be practical jokers, doing some unusual thing to discomfit the bee-keeper and then chuckling over it.

July 29, this year, a queen-cell with 3 eggs in it was found in colony No. 2. The presence of more than one egg in a queen-cell is a sure sign of laying workers, but this case, instead of a sure sign, proved a joke, for 10 days later brood showed that the queen had been present.

August 12 a swarm was seen issuing from this same hive, No. 2. Pretty soon a queen was caught issuing from the entrance, but instead of having clipped wings, her wings were whole—she was a virgin! She was caged, and the cage was stuck in the entrance. Examination showed that no queen-cells were in the hive, nor any unsealed brood.

The swarm returned after a time—it was a big one—and the queen was liberated in the evening. So far as we know they did not swarm again, and 8 days later she was found laying nicely. The question is whether the bees intended to abscond, leaving no sign of a queen or a queen-cell in the hive, whether they were trying to accompany the young queen on her wedding-flight, or whether it was all a joke.

August 16, a swarm issued from No. 49, and returned. The next day the hive was opened and a virgin was found present. A day later a large swarm issued again, settled on a tree, then arose and settled on another tree. It stayed there so long that it looked



# American Bee Journal

as if the next move would be to go off for good. So it was hived, and a frame of brood was given to it. Soon after being put on its stand the swarm came out again and returned to its old hive—all but a few bees which stayed on the frame of brood, making a nucleus to which a virgin was given 3 days later, and today she is busy laying eggs. A few days later a young queen was found laying in No. 49, and she was promptly clipped.

It would seem that No. 49 had no notion of going off any of the time, but was only making believe so as to frighten us.

No. 33 swarmed and its clipped queen disappeared. Five days later a young laying queen was dropped on one of the combs among the bees. A rather reckless way of introducing, but when there is a good flow of nectar it is often successful. Three days later neither eggs nor queen were found in the hive, and a lot of queen-cells had been started. It was marked queenless in the book, and a virgin was given. When she was old enough to be laying, plenty of eggs were found, and search was made for the queen so as to clip her. But when she was found she was already clipped. Clearly the laying queen that was dropped on the comb had not been killed, but had remained in the hive 3 days or more without laying. Was she hidden in some corner of the hive chuckling to herself when the fruitless search for eggs was made?

Of course, the virgin queen had been killed, but if the laying queen had not been clipped the mistake might have been made of supposing that the virgin had succeeded in introduction.

## European Foul Brood

A bee-keeping sister who has a little European foul brood in her apiary desires to know whether we still prefer to treat that disease by temporarily stopping brood-rearing rather than by melting up the combs. Yes, we do. We have returns of the disease after such treatment, but so we did when we brushed the bees upon foundation and melted up the combs. But if watched reasonably close no case ever becomes very bad. One of the most important things in the treatment is to make sure that the colony is made *strong*, either by uniting colonies or by giving frames of sealed brood from healthy colonies; of course, unless the colony is already strong. No use trying to do anything with a weakling. The queen may be killed, and, at the same time, with proper precautions, a queen-cell or a just-hatched virgin of very best stock, Italian preferred, may be given, and the bees will do the rest. If there are only a few bad cells in the hive, and a vigorous queen is present, the queen may be caged in the hive for 8 or 10 days and freed at the end of that time, all queen-cells being killed.

Last year every case was thus treated, even if only a single bad cell was found in the hive. This year there are about a third as many cases as last year, so the matter does not look hopeless. Of course, we cannot tell how many or which cases came from diseased colo-

nies outside, and which from germs within their own keeping.

It is proper to remark that we have had several cases with only a very few bad cells in the hive where the bees have cleaned it up without any killing or caging of the queen.

## Dandelion

BY NELLIE M. GARABRANT.

[To get the full effect of the following dainty bit of verse, read it aloud:—EDITOR.]

There's a dandy little fellow  
Who dresses all in yellow—  
In yellow with an overcoat of green;  
With his hair all crisp and curly.  
In the spring-time, bright and early,  
A-tripping o'er the meadow he is seen.

Through all the bright, spring weather,  
Is seen his yellow feather,  
As he wanders o'er the hillside down the road.  
In mossy hollows damp,  
Where the gypsy fire-flies camp,  
His companions are the woodlark and the toad.

Spick and spandy, little dandy,  
Golden dancer in the dell!  
Green and yellow happy fellow,  
All the children love him well.

But at last this little fellow,  
Doffs his dandy coat of yellow.  
And very feebly totters o'er the green—  
For he very old is growing.  
And with hair all white and flowing.  
A-nodding in the sunlight he is seen.

The little winds of morning  
Come a-flying through the grass,  
And clap their hands around him in their glee.  
They shake him without warning—  
His wig falls off, alas!  
And a little bald-head dandy now is he.

Oh, poor dandy, once so spandy,  
Golden dancer on the lea!  
Older growing, white hair flowing,  
Poor little bald-head dandy now is he!

—Canadian Bee Journal.

## A Swarmy Season

In northern Illinois the season of 1912 has been perhaps the swarmiest on record. No doubt the heat coupled with the great dampness had something to do with it. When a young queen is reared in a hive and begins laying, we figure that there is no need to count on any swarming from that hive before the next year.

Well, this year we had two cases in which a young queen was reared in the hive and began laying beside her mother, and yet those young queens issued with swarms. It was not because these two queens were reared so early, for a queen reared very early may be counted somewhat as a queen reared the previous year. In No. 7 the young queen did not begin laying until after June 11. In No. 64 the young queen did not begin laying until after July 11. And yet that miserable youngster came off with a swarm Aug. 26.

It seems that there has been trouble elsewhere with swarming. In the British Bee Journal is given the following case of one of the British sisters:

"A lady began bee-keeping with a 4-pound swarm, hived on May 20 on eight sheets of foundation. As the queen was not fertile a week later, two frames of brood were given to the colony. By June 28 the queen had filled every available cell with brood and the bees began a case of sections. On July 12 a 5-pound swarm issued from the hive, and as the honey season was considered at an end it was not returned, but placed in a new hive on six sheets of foundation and one frame of brood.

The next day, the 14th, was very hot, and a splendid honey day, and, strange to say, the bees of this last swarm must have made up their minds to give off a swarm for this issued on the 10th, leaving three frames of bees, an abundance of eggs, and four queen-cells, some of them containing larvae apparently two days old. This small colony was given a frame of brood and a ripe queen-cell and will doubtless soon become a vigorous colony.

I need hardly say, perhaps, that the queens which have played these "pranks" and their relatives will be dethroned before the winter.

## FAR WESTERN BEE-KEEPING



Conducted by WESLEY FOSTER, Boulder, Colo.

## More About Co-operation and the Middle-man

In my small article on bee-keeping and accounting in comment on Mr. Foster's article in the June issue of the Bee Journal, I seem to have started something.

I had no idea I was so far behind the times. In my simplicity I had taken for granted that the principles of accounting applied equally to all other business as well as the retail lumber business. But, according to Mr. Foster, it can not be fairly applied to bee-keeping. Again I learned that I was entirely wrong in figuring the labor account in bee-keeping. Instead of charging the bees with only the actual time for the work of caring for them, I should have followed the example of the "Professional Snow Shoveler," who, on account of making a living for himself and family, insisted on charging prices accordingly for the few days he did have work at his trade in this climate. There is one matter mentioned by Mr. Foster on which we seem to agree, that is where he marketed his honey direct to the consumer, and made him pay an additional price for the completed service, a thing which, when done in part by the middle-man, is quite generally regarded as a seri-

ous offense against morals, and the vested rights of the producer and consumer.

But these few cases of getting the goods to the consumer mentioned by Mr. Foster were easy. Take the case of the Iowa farmer, wanting a couple of boards from Washington to repair his hay-rack, or one piece of oak from Arkansas to repair his machine, or one thin poplar board from Tennessee to fix something about the house. Even that panacea for all the ills of the markets, the parcels post, with all its possibilities of graft and subsidy, would do no good. After working the telephone to all the neighboring towns, in the hopes of salvaging a nickel, he would still have to knuckle to the conscienceless "lumber trust," in the person of the retail dealer, as the cheapest source of supply.

This question of doing away with the middle-man is as old as the oldest recorded human history. It seems to be one of the unsolved problems coming down through all recorded time. If there is any cheaper way to accomplish the services performed by the middle-man, it surely would have been found by this time. To all appearance he will be with us up to the time when the producer and consumer shall have no further occasion to produce and consume. In the mean-

## American Bee Journal

time, the middleman will insist on getting enough compensation for his services so he and his family can live, *provided he gives his services at least as cheaply as anybody else does.*

In regard to returns on money invested, Mr. Foster's ideas are surely exaggerated when he expects them to at least equal prevailing rates of interest on money. I can assure him there are many owners of Iowa high-priced land that would be willing to give something for information of a sure way to rent their farm land for cash to net them in an excess of 3 percent on its marketable value.

Mr. Foster, in his off-hand way, says that the labor required for caring for bees amounts to \$2.00 or \$3.00 per colony. This might apply to a few colonies, but in case of a large number of colonies it looks like a "watered" labor account, after the manner of some of our great corporations issuing watered stock as bonuses or melons, this rolling and thinning out actual investment, so as to properly cover up the enormous profits.

Now, Mr. Foster is a bee-keeper, and if he keeps records he can give us the exact figures in his case. If he keeps no complete accounts, his guess is of little value as against actual records. With these few comments, I will be pleased, on my part, to close this unexpected controversy. It does not appear to me that any actual general information of value can be secured by a lot of statements unaccompanied by actual facts, or by appeals to that time-tried prejudice against the "unholy profits" of the middleman.

Yours truly,  
Madrid, Iowa.

G. W. FEHLEISEN.

I gave my accounts in the June issue, and Mr. Fehleisen has not given his. I might say that a good western bee-man can do the bee-work for 100 colonies in about a month's time, but he will work more than 8 hours to do it, and perhaps 7 days in the week during the swarming season. The whole family generally help, so that as this additional help is not counted in, it is pretty hard to give exact figures. One dollar for supplies for a hive is the general estimate here in the West, where comb honey is produced. My figures showed only 83 cents per hive. If Mr. Fehleisen will set down as full an accounting as I have done in the June issue, I will be glad to see it. My accounting for 100 colonies there shown is better than I have averaged for a 5-year period.

Mr. Fehleisen is not imbued with the spirit of the co-operative movement; he does not realize that this working together of producers is broader than parcels post, the marketing problem, or the elimination of the unnecessary middlemen. The co-operative movement is an expression of the growing mind and heart of the people. Producers are getting together in Iowa under the leadership of Holden, and are raising more and better corn—that is one phase of the co-operative movement. Western fruit men are getting together in grading and packing schools where they can learn to put up a box of apples; not one with a worm in it, and every apple larger than 2¼ or 2½ inches in diameter. An absolutely honest pack is being put out in a half dozen western States, fostered by the fruit associations. This is another phase of the co-operative spirit. Producers in Europe have the parcels post, and the demand for it here is an expression of the co-operative spirit which seeks to have the utmost of efficiency in production and distribution.

Every successful co-operative association is proof that it is more economical than the competitive method. If it were not, the co-operative association could not last. The greatest benefit of co-operation is that it makes the pro-

ducers honest. If they ship with their fellow members, each has to put up honest goods. There is no chance of beating the buyer, as is so often tried by producers selling to dealers.

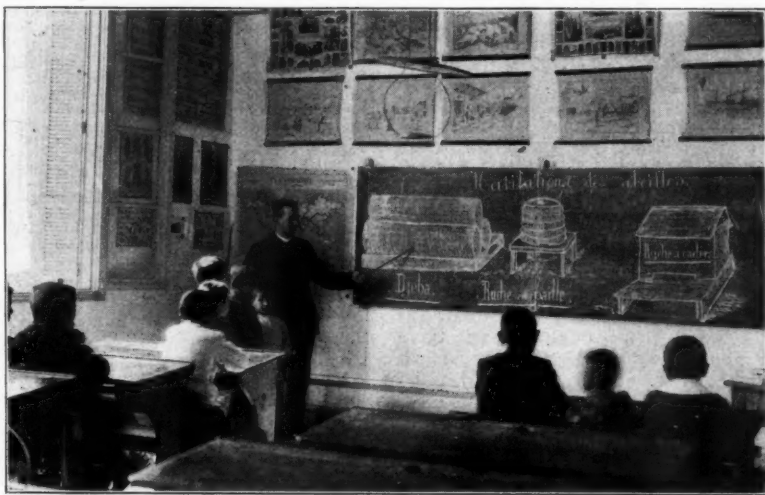
I do not think that producers are any more honest than any other class of men; they are human, but the co-operative method of distribution tends to make them honest. The members soon catch the spirit of co-operation, and they become better men. Co-operative associations are in a limited way doing the work of distribution where direct dealing with the consumer is impracticable. We probably never will have a direct dealing in all lines between producer and consumer. Distribution is in a sense a part of production, and is the field for the activities of the co-operative association.

Mr. Fehleisen considers the middleman a permanent fixture, while I consider him a temporary means to be

the easiest to rear that I have ever known, and nearly everything superseeded, sometimes twice during the summer. Swarms were still issuing Aug. 25 in some of the Arkansas valley apiaries. Colorado is not alone in this swarming proposition, as Idaho had a like experience. Not having any reports from other western States at hand, this is all that I can speak for, but the season was such that Utah and Wyoming probably resembled Colorado and Idaho in the matter.

### THE HONEY CROP.

Colorado very nearly made up her loss in bees of the past winter in the increase by swarming, and honey will be shipped this year in about the same amounts as in 1911. The Western Slope will not have as much shipping of honey as last year. The Arkansas valley will have more comb honey and a great deal more extracted. Northern



DESCRIPTION OF NATIVE AND IMPROVED HIVES AT THE COMMON SCHOOLS IN MANOUA, TUNIS—(See page 295).

employed until we have direct dealing and co-operative distribution in successful operation. If the middleman can distribute goods as cheaply as it can be done by direct and co-operative effort, the middleman will be with us for a long time. That is the question. Mr. Fehleisen thinks he can, while I believe that the producers and consumers will find greater profit to themselves to take over distribution along more economical lines. Sentiment will not rule here. Producers and consumers will not allow an undue tax to be exacted for the act of distribution when they get wisdom enough to organize and keep more economical systems in operation. And I am satisfied that they are learning.

### Swarming in the West

The increase in bees has been large this season. Swarming has been a problem to the extracted-honey men as well as the comb-honey producers. The increase has been as high as 300 percent in some apiaries near Denver. Many swarms were lost through lack of hives to hold them. Queens were

Colorado will have about the same as last year, if not more. Reports from northern Colorado are a trifle conflicting. If I should write this 10 days later I could give a more accurate report. Idaho will ship more honey from the southern and western portion, and less from the eastern part if my informers have had yields indicative of the whole districts concerned. The quality of the comb honey in northern Colorado is below the average, our crop near Boulder being a decided yellow.

### THE HONEY MARKET.

Comb honey buyers have bought the most of the honey in Idaho and eastern Oregon at \$2.75 for No. 1 and \$2.50 for No. 2. This is considered a good price when freight rates are noted. The honey was contracted for about the first of August. Idaho and eastern Oregon have a whiter honey than that of most of the Colorado districts, but their grading methods are not as close as those stipulated in the Colorado rules. Quite a large amount of cull honey is included in the No. 2 grades, and a rather wide latitude is given to the No. 1 grades. The shipping-cases used are



## American Bee Journal

of cheaper construction, as a rule. The claim is made that there is far more money in putting up comb honey, as they do in Idaho and some parts of Colorado, and selling at \$2.50 and \$2.75 than grading more closely and getting \$2.80 to \$3.25. It certainly takes less time and effort than where one follows the new rules closely.

Comb honey is selling in the Arkansas valley at \$3.00 to \$3.10, and sales being made about as fast as the producers can get the honey ready. There will be but few carload shipments of comb honey from the valley this year on account of the demand in Kansas for local shipments. A sale was made late in August of nearly a car of extracted honey at \$8.50 a case of two 60-pound cans. In local shipments of more or less size the price is \$10 a case with good sale. Bulk-comb honey sells

faster than the producers can cut out their baits and fill the cans with them at \$6.00 for a 60-pound can. A few get \$6.50 for this honey.

In southwestern Colorado comb honey brings about \$2.40 a case; the price would be better if the freight-rate was not so prohibitive, making it impossible to cater to anything but a local market. Extracted honey, however, brings 8 to 10 cents a pound, which helps even things up a trifle. There is not going to be a large amount of comb honey left in Colorado after Christmas, and this is as it should be. There are a great many bees for sale in the State this year, and any one wishing to get a foothold should have no trouble in buying an outfit at less cost than moving a carload into the State and crowding some other beekeepers' territory, or perhaps making him think he is being crowded.

that usually plays havoc on the colonies as related by Mr. Smith.

This same question came up at one time when I attended the North Texas Bee-Keepers' Association meeting. I recommended the aforesaid two remedies to be tried out by the bee-keepers who were thus located. What the results were I have never learned, but being interested in these things, as well as all information on apicultural topics of the State of Texas in the capacity of Apicultural Expert of the Texas Department of Agriculture, it would give me great pleasure to hear from some of the north and central Texas bee-keepers on this subject.

For the benefit of those who have not a copy of my recent bee-bulletin, the following concerning sweet clover is herewith reproduced:

### WHITE AND YELLOW SWEET CLOVER.

As a general rule none of the clovers thrive well in this State except the sweet clovers—white sweet clover (*Melilotus alba*) and yellow sweet clover (*M. officinalis*). Seasons over most of the State are too dry for the white clover, from which the greater part of the honey of the northeast is produced. There are a few localities in the south Texas coast country, however, where this grows well.

In many places in Texas there are periods during which there is no bloom from which the bees can obtain even enough honey for the sustenance of their colonies. These dearths, between honey-flows from natural sources, are sometimes very long ones. In some localities they occur between the spring and fall flows, and are very serious, as the bees sometimes starve during their continuance unless fed. Feeding bees at these times is objectionable, because it incites robbing and stimulates the bees to unnecessary brood-rearing, besides using up a large quantity of food. In such cases, planting of sweet clover beforehand, to tide the bees over, might bring good results, as the clover, if it thrives, will come into bloom and yield nectar during the time. There is great variation in the length of these dearths in various localities, beginning and ending soon in some and late in others. In many places the gap may be filled entirely by the blooming period of sweet clover, which begins about June 1 in most localities, and a little earlier in other and more protected situations, and depending also upon weather conditions. The yellow variety begins to bloom several weeks earlier in the season. Either variety, however, would cover the period of the average dearth, and the *Melilotus* blooms very well in favorable seasons when planted in localities favorable to its growth. In situations not so favorable, and during dry seasons, the blooming period is shortened considerably. However, it generally extends during June, July and August.

Sweet clover grows well after it is started, and waste places, in which are found the poorest soils, can be planted with this forage crop for the bees. There are thousands of acres of such waste land that could be made to grow sweet clover in the place of weeds. Our fence rows would be worth thousands of dollars if sweet clover grew where weeds of no use whatever now disport themselves. Especially would the clover be valuable where the nectar yield would be produced just at a time when there was nothing else in bloom.

It was once feared that sweet clover was a noxious weed that spread rapidly and was hard to kill out of a field. This apprehension has been proven to be baseless, since a single plowing will kill the clover, and there is no danger of its spreading out of its bounds. It grows well in the northeastern part of the State, where it has become abundant in various places. It needs little attention in localities where the atmospheric and soil conditions are not too dry. In the dry parts of the State (west and southwest Texas) it is hardly advisable to plant sweet clover except in some of the lowland fertile valleys and along streams. It has been found that it grows luxuriantly when drilled in rows and cultivated, but it would hardly pay to do this as a forage plant as its growth is large and coarse.

The seed should be obtained in the fall of the year and scattered in waste places and along fence rows, and rains will beat it in

# SOUTHERN



# BEEDOM~

Conducted by LOUIS H. SCHOLL, New Braunfels, Tex.

### What Strain of Bees is Best for South-western Texas?

One of the difficulties the apiarist has to contend with in this part of Texas is the long-continued drouth, although taking the State over, I don't suppose it is more subject to drouths than many others. It is a very large State, and portions of it are almost a barren desert.

The extreme drouths are mostly confined to central west and southwest Texas. When they prevail it is next to impossible to get the bees to breed up; all vegetation dries, and there is practically nothing for them to get in the way of either pollen or honey. Queens stop laying, the bees cluster on the outside of the hive, and the novice is often led to believe that they are preparing to swarm. This goes on from day to day, even weeks, then a shower comes, followed with more or less bloom, and the queens soon fill the hives with eggs, but by the time the mesquite (pronounced mesquite) blooms, which is from three to four weeks after the rain, the old bees have died off until there are very few left to gather the harvest. Such is the case here at the present writing. We are having a fine mesquite flow with very few bees to gather it.

We often resort to feeding at such times, but unless there is something to furnish pollen, that is a failure, for the bees do not develop the eggs into brood.

Some 30 years ago, when the Cyprian and Syrian bees were imported by D. A. Jones and Frank Benton, we gave them a trial with the hope of overcoming this trouble. They were said to be great breeders by the late B. F. Carroll, of Dresden, Tex., and others that were favorably impressed with them.

They were an improvement over the Italians as breeders, and perhaps as workers, but their extremely cross disposition was too much for me. I have since kept more or less Carniolans, and their crosses in one of my out-apiaries, but their excessive swarming, when everything is favorable, makes them undesirable for an out-apiary, although they are good workers and comb-builders. I would be pleased to hear from Mr. Louis Scholl, or others who have tried the Caucasians in the South, where we have these long drouths.

Rescue, Tex.

L. B. SMITH.

Now, Mr. Smith, you leave the impression that we have an awful land here in Texas, when you lament about the serious drouths that we have to meet sometimes. But is it not a fact

that these drouths do not exist in all parts of the State at the same time, and that they do not always affect the honey crop? We may say that we make just as good honey crops in various localities, with a long drouth at some time of the year, if we only have a fall or winter season to aid the plants and trees in nectar-yielding the following spring or early summer. Mesquite is one of these.

I hardly think that we can overcome the difficulty mentioned by you with any race of bees as readily as we might with the proper management and manipulation of our colonies. I know that there are localities in north Texas where long, continued drouths exist between the early spring and the fall honey seasons. It is impossible to keep the colonies over this dearth successfully by leaving the honey on the the hives, for the reason that they will breed heavily until it is all used up. They may even swarm during the dearth and the swarms be lost by starvation unless fed or supplied with honey. To prevent this I recommended, many years ago, to take away the combs of honey and keep them stored so that a few at a time could be given when actually needed. This would help to discourage the heavy breeding and swarming during the drouthy period. Tiding the colonies over the drouth in this way would keep them in normal strength; but with some extra labor, however, they would be in good shape for the cotton honey-flow from which the main part of the honey-crop is realized.

Another remedy that I have suggested is the planting of sweet clover, so that a moderate flow of nectar may be created during the drouth period. Since this generally lasts during May and June, sweet clover comes in very nicely, as it begins to bloom and continues over the entire drouth period

# American Bee Journal

It is best where grass and weeds do not crowd the plants out. When once started it re-seeds itself. Being a perennial it does not bloom until its second season's growth.

Sweet clover honey is of good quality, light in color, and of very good flavor. The bees work industriously on the bloom from early until late.

the other 2 have not that much. I there is enough to pay the feeding bill, it will be better than nothing, anyway. All this wet weather had one good effect for the bee-keeper; that is, the clover is wonderful all over, and, barring winter killing, the prospects are good for next year from that source.

## CANADIAN



## BEEDOM~

Conducted by J. L. BYER, Mt. Joy, Ontario.

### Ontario Bee-Keepers' Association Will Meet in Convention

The Ontario Bee-Keepers' Association will hold their annual meeting in Toronto Tuesday, Nov. 12. The program is not ready, but as soon as it is prepared due notice will be given, also information about railway rates, hotel accommodations, etc. Needless to say, as usual, we are expecting a large attendance of Canadian bee-keepers and a big bunch of our cousins from "over the line." At the season of the year when the convention is held, most of the bee-keepers' work is done, and a holiday certainly does one good after the busy months of the summer season.

One unfortunate thing in connection with the date of the convention is, that it prevents many of our best bee-keepers from attending, as a lot of them are nimrods, and are away at that season on their annual deer hunt in the northern woods.

In speaking of this, I am reminded that at the north yard, established this spring, an occasional deer wanders in among the bees, one being seen in the apiary a few weeks ago. Just how the bees treat their pretty visitors I am not prepared to say, as I have not seen any in the yard when I have been there. As there are also a few bears in the same locality, I have been wondering if they would visit the apiary later on, but I am not anticipating any harm from depredations on their part. However, if any should decide to visit the apiary, I hope it will be when some one is around so that I may have the privilege of treating some of the convention visitors to a "slice of bear steak." Certainly, I would like to have a menu of that variety to complete the anticipations of a friend in the States, who said he was taught in the schools that up in Canada the winters are so cold that often the inhabitants have to drink raw oil to keep from freezing to death. Bear steak and raw oil should be warm enough diet to satisfy the most cold-blooded mortal on the continent.

### Little Nectar in Buckwheat

The long, cool, wet spell has stayed right with us all through August, and as a result the many acres of buckwheat have yielded little nectar, and heavy feeding for winter will be necessary to keep the bees from starving, as in all my experience I have never seen brood-nests so full of brood as they are now (Sept. 7). The bees have seemingly just enough to stimulate brood-rearing, and the hives denote June conditions rather than September.

September, to date, has been warm and sultry, and this is aggravating the situation, for the fall flowers are yielding just enough to keep up this heavy brood-rearing. Italians, which are usually very conservative about brood-rearing at this season of the year, are as bad as Carniolans. This means not only a heavy feeding, but late feeding as well, as it would be folly to do any

### Are Queens Fertilized Near the Hives from Which they Issue?

Whether queens, as a rule, fly a long distance from the hive when on their mating flight is, I believe, a mooted question. Some observations in a small apiary of mine lead me to believe that most of the queens are fertilized near the hives from which they issue. Some 6 or 7 years ago I placed about 20 colonies with a friend who had about the same number, and the apiary consists of about 50 colonies at present. Mine were placed about 6 rods to the



EXPERIMENTAL APIARY, MANOUBA, TUNIS.

feeding under present conditions. Mr. Knox, of Orono, Ont., has sent me a reading of the thermometer from Aug. 17 to Sept. 5, and a glance over it will show why the buckwheat was a failure.

	Morning Deg.	Noon Deg.	6 p.m. Deg.
Aug. 17.	50, cool, cloudy at night		
18.	50.		
" 19.	60, cloudy all day	70.	64.
" 20.	62, sunshine at Markham		
" 21.	62.		
" 22.	60, foggy		70, rain
" 23.	54, sunshine	76.	50.
" 24.	47, rain	62, rain.	58.
" 25.	65, sunshine	88.	70.
" 26.	66, rain	80.	64.
" 27.	60, clear, windy	70.	
" 28.	50, cloudy	56, rain.	52.
" 29.	54, sunshine	70, sun.	50.
" 30.	42.	71.	48.
" 31.	52, rain.	70.	54.
Sept. 1.	58.	72, cloudy	50.
" 2.	58.	70, rain.	60.
" 3.	64, cloudy	sun.	
" 4.	sunshine	80.	
" 5.	sun and rain	86.	rain

In our section we had some early buckwheat, and during the first week of August three or four hot days. During these days the flow was very heavy, and we looked for a big crop of buckwheat honey. As it is, 5 of the 7 yards have each about one full super, while

southeast of those of my friend, and between the 2 lots there is a heavy growth of fruit trees, mostly apple and plum, with shrubbery underneath the trees. My bees were mostly Carniolans, while the others were native blacks of a nervous, cross disposition.

After these years of close neighboring, my yard is still largely Carniolan, while the other bees are as black and nervous as ever. I expected a general mixing up, and still expect it, but I am surprised at the way the two different lots have preserved their identity, and can form no other conclusion than the one advanced.

### Glad Reciprocity Was Not Carried

Speaking of crop and price conditions, in the Bee-Keepers' Review for September, Editor Tyrrell says that first-class honey should command not less than 9 cents, wholesale, in 60-pound tin cans; this is, I believe, in reference to raspberry, clover and basswood honey. As we are readily getting 11 cents per pound, wholesale, for our honey in Ontario, it is needless to say



## American Bee Journal

that many of us are not sorry that reciprocity was not carried into effect a year ago. Without that 3 cents per pound duty on honey coming into Canada, how long would we get 11 cents? Extracted honey of first-class quality at 9 cents is *altogether too cheap* when compared with the price of other food products, and it is time bee-keepers were organized so that such a condition of affairs can be remedied.

### Out-Apiary 200 Miles Away

On Monday, Sept. 9, I expect to leave for the east yard, some 200 miles away, to take care of the buckwheat honey and get the bees ready for winter. My son came home Aug. 1, and since that date we have not been there. After getting the bees ready for winter, we will not see them again until next May. A competent man will put them in the caves in November. Long range bee-keeping of this nature has some drawbacks, but it affords pleasure, as the trips give one an opportunity of seeing the country, and it breaks the monotony

of life. The expenses of traveling are an item to be considered, but with bees in different places, one is not so apt to meet with a complete failure all around. However, 200 miles is a little too far, and next spring we contemplate moving this lot nearer home, provided a suitable location is found.

### A Swarm of Bees in September

With little nectar coming in, and that little coming nearly every day, the bees seem to think that June is here instead of September, and Sept. 4 a touncing swarm came from a colony headed by a queen of this year's rearing. This is a new record in my experience, and instead of returning it to the hive which would no doubt have been the most profitable thing, I hived them on drawn comb and gave them two combs of brood as bonus. With winter stores supplied, I see no reason why they should not survive the winter. If a "swarm of bees in July is not worth a fly," what about a swarm in September?

fine climate and the great variety of honey-plants, it has a great future.

### The Proper Way to Start Bee-Keeping

We became interested in bee-culture in 1897, and began working with some of our pioneer bee-keepers, namely Mr. A. B. Marchant, Mr. S. S. Alderman and Mr. C. F. Glenn, all of whom are widely known as apiarists of knowledge and experience.

In 1900, we bought 100 colonies from Mr. Marchant, costing us about \$6.00 per colony when we placed them on stands in our yard. The first season we actually got 30 barrels of honey from that 100 colonies of bees. This was an exceptional flow, and is still talked of. We have never had such a flow since. The following two years, 1901 and 1902, we did not get any honey. But we have had small flows each season since, averaging about one-third of a crop each year, counting it on a 10-year basis. We have never had any trouble in marketing honey. It has proved to be a profitable investment, even with failures and short crops. It is pleasant work, and both of us take great interest in it.

Our apiary is located at Kentucky Landing, on the Apalachicola river, in the heart of the tupelo belt. At one time, we had a good many Italian bees, but owing to wild bees and other apiaries they have bred back into almost black bees. Still, at the time we had the Italian bee we also had the black bee, and there wasn't any difference as to the amount of honey gathered. It was rather in favor of the black bee.

We are, at this time, requeening every colony in our yard, of which there are more than 200. We use regularly the 10-frame hive with Hoffman frames, and produce only extracted honey. We have our wax made into foundation, and sell surplus, if any, after we have sufficient foundation.

RISH & BROTHER.

Iola, Fla.

### A Large Apiary in the South

Mr. J. R. Hunter, of Wewahitchka, Fla., handed the writer, while on a visit to him this summer, a snap-shot of one of his apiaries located on the Chipola river in west Florida, in the great tupelo gum region. This was a picture of 250 colonies, all run for extracted honey. The picture which is here produced would very well illustrate an article in the Dixie Department for August, answering the question, may bee-keeping be resorted to as a sole occupation which will bring sufficient returns for a livelihood. The thrift of this apiary denotes that it does in this instance at least. The amount of capital invested is very small, but coupled with energy and a great love for the work.

In our department for September the picture and article show that we can invest capital in bees and turn them over to trustworthy and energetic people and receive good returns from the investment. Now this article, with picture, shows how tidy any apiary can be kept even if it is very large.

There are many apiaries that show

## BEE-KEEPING



## IN DIXIE~

Conducted by J. J. WILDER, Cordele, Ga.

### Carrying Honey Over Until Spring

It will be almost impossible to dispose of all the summer crop of honey to the best advantage before it granulates on the market, and thereby gives trouble. This will especially be true for the large producers. As the market is well supplied sales will be slow, as cold weather is near at hand, and most of the honey will granulate, it will be best to only remove what we have sales for. As soon as cold weather is here, shut off the sales and leave the rest on the hives until spring. It can then be removed and put on the market before the spring flow begins, and as there will be great demand for it, it should sell at a good price.

At the approach of cold weather the honey should be equalized among the colonies, so the bees can take better care of it; for if a large surplus is left on some of the hives it will get cold above the cluster and stay thus during winter. It is not best to keep too much honey on the hives for this reason. I have kept as much as one super of surplus honey on many colonies during winter, and I have had a fine lot of honey for the early spring trade.

### A 3000-Mile Trip Visiting Bee-Keepers

It is my greatest desire to know the end of all things relative to bee-keeping within the bounds of Dixie, that I may impart the information thus obtained to others.

To do this, and do justice to my business, I must make tours visiting progressive bee-keepers all over the territory as often as time admits. My longest trip, which was about 3000

miles, was made this summer. It is needless to state that what I saw of our industry would make a large volume, and much of it would be practical and instructive. I will use some of the information thus collected as space and time permit.

I saw a number of bee-keepers who produce honey by the carload, and apiaries where all colonies were keeping pace storing; no colonies running ahead or behind, but were on equality in strength and storing. These bee-keepers were expert queen-breeders as well as honey-producers, and kept a close record of everything. Some bee-keepers were badly discouraged because other lines of business had completely crowded out bee-keeping. But the greatest number were those who had taken up bee-keeping as a side issue. They were greatly encouraged over their venture, because the returns had been good and losses few. They expressed themselves as not even thinking of laying aside bee-keeping, for they could not afford to.

Lots of beginners were at the front with their few colonies of bees, and asked a good many questions on bee-culture. Nearly all of this class of bee-keepers wanted me to give them the "royal road to bee-keeping," so they could soon and easily become extensive bee-keepers. This, I told them, can only be done by constant study and work.

Summing up the whole trip, I must say that I am delighted with the progress of our industry, for I saw and heard things about it that I had never dreamed of. After all, our industry is not so small here as it is supposed to be, and taking under consideration our

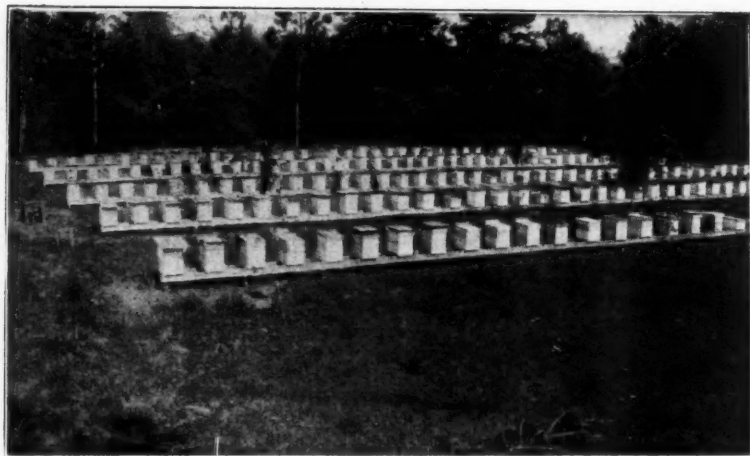
# American Bee Journal

to some extent dilapidation through neglect on the part of their owners. This ought not to be. This picture also shows to what extent the industry can be carried on here, and that very large apiaries can be established in certain sections. We do not have to go to California or some other great bee-country to find large and well cared for apiaries, for we have them in our own limits.

The scrubby, thick bushes in the

background are spring titi, which is our first honey-plant of any consequence in early spring, begins yielding in February and lasts until our great honey-plants commence blooming. The titi is indeed a great honey-plant.

Mr. J. R. Hunter is a young man of sterling qualities, and will surely be heard of from time to time. He is very enthusiastic over bee-keeping, and is now making it his main line of business.



APIARY OF J. R. HUNTER, OF FLORIDA.

## CONTRIBUTED



## ARTICLES~

### How Bees Feed One Another

BY G. M. DOOLITTLE.

"I have a puzzle on hand and would like to have an answer to it. I have been using what is called a queen-nursery. These are cages made of wood and wire-cloth for the purpose of holding queen-cells away from the bees until the young queens emerge from the cells. And as these young queens need not be taken out of these cages just as soon as they emerge, a hole is bored in the wood which is filled with a sponge having honey in it. In this way the young queens can get feed until the bee-keeper wishes to use them as necessity requires. At least, such is the theory put forth for the advantages of this way of keeping queens.

"But I find that in use more than half of these young queens die before they get to be from 3 to 5 days old. They seem to be unable to help themselves to this honey in the little sponges sufficiently to sustain life.

"Now for the puzzle: All know that a young queen, when first emerging at maturity, is a weak, white, downy thing, often hardly able to cling to the combs; but with each hour getting stronger until, when about 2 days old, she seems to reach her normal strength, and where there are rival queens in other queen-cells, which are held back in these cells by the bees, this queen, at liberty, utters shrill peeps as she goes about in the hive. This is called the 'piping' of the queen. If bad weather keeps the colony from sending out an after-swarm at this stage, other young queens still held in the queen-cells by the bees, answer this piping, but in a muffled sound, as I suppose the walls to the cells holding them keep them from making so loud a noise as does the one at liberty.

"Now, what I wish you to tell the readers of the American Bee Journal is this: How do those queens in the cells live after arriving at maturity? If many of the queens in

the nursery-cages, with plenty of honey within easy reach die, how can these queens, kept within the walls of their cells, a space scarcely one-twentieth as large as that in the nursery-cage, with no provision for their food live? Last swarming time I cut out 17 queen-cells from a colony where the second swarm had been kept back 5 days by bad weather, and before I had set the last frame back in the hive for the returning of the swarm, 14 or the 17 cells had hatched and the young queens flown away."

Thus writes a correspondent about something which has puzzled hundreds, if not thousands, of bee-keepers all through the past, and I was equally puzzled for several of the first years of my bee-keeping life. One year I had a colony where I heard the first young queen piping on the evening of the eighth day after the prime swarm had issued from it. On going to the house I told Mrs. Doolittle that this colony would swarm the next day, as I had heard the queen piping therein. With the next morning a steady rain set in, which lasted for three days, when it became cool and cloudy for two days more.

On listening at the side of the hive near nightfall, at the end of the fifth day after I had heard the first queen piping, I was amazed at the turmoil I heard. The first queen would pipe, when immediately there was a chorus of muffled "voices," some of them being kept up until the queen, at liberty, would pipe again, when the whole "band" would strike up once more, so

that there was hardly a second of time that there was not "music" for the whole force of worker-bees to "dance by." I resolved that in the morning I would open this hive and see what I could find.

As the morning proved fine, 6:30 o'clock found me with the hive open and a frame with the bees and two queen-cells in my hands. With a little smoke I dispersed the bees from these cells, which were near together, when, presently, I saw a tongue poked out through a slit in the capping to the cell where the capping is usually cut out when a queen emerges. This tongue was stretched out as far as it could reach, when, at that moment, a bee returning from being driven away with the smoke, put its mouth down to the tongue, and, in the morning sunshine, I could see the honey sparkle on the tongue of the young queen, as "she took her breakfast." Soon the queen in the other cell put out her tongue and was fed in the same way. I then shook the bees off of this comb a little way in front of the entrance, spreading them along so it would take some time for them to crawl in, and watched for further developments from the queen-cells.

The tongues came out again, this time apparently as "feelers," to see if there was the usual knot of bees over the cell to keep them in, but finding nothing, a little clipping noise was at once heard, and in less than a minute the cover on one of the cells was raised and a fully matured queen stuck her head out, the cover to the cell having been nearly cut before this, as the whole cutting, except the little slit where the tongue came out, could hardly have been done so quickly. The head was drawn back again, as if fearing it might be unallowable for the body to go out just yet. Then out it came again, drew back once more, when, with the next move, the queen was fully out, ran about on the comb for a second or two, and apparently hearing the humming of the bees going in at the entrance, which I had shaken from the comb, she took flight, sailed around three or four times, alighted down with the bees and ran into the hive. I still held the comb in my hand, only to see the same thing done by the other queen. As I wished no second swarm from this hive, I shook the bees from all the frames, destroyed every queen-cell found, and closed the hive.

The next morning I found two dead queens in front of this hive, showing that a "mortal combat" had taken place between the queens at some time during the 24 hours. All swarming for the season was given up.

This proved to me that the bees could keep queens in confinement, even in so cramped a place as the walls of a queen-cell, much better than we bee-keepers could with all our knowledge, and in the larger apartments of a nursery-cage. It also proved to me that bees were ever on the alert to provide for any and all queens which they were desirous of preserving, feeding them as much as was required for their posterity; while, if they did not wish queens that were thrust in their midst in such a way that they could not get at them to kill them, they could, by



## American Bee Journal

some means, persecute them so that many of these imprisoned queens would die, even where the apiarist provides plenty of food for them.

This is illustrated at its best by caging the mother-queen in a wire-cloth cage without any food therein. The bees will almost constantly offer her food by putting their mouths against the wire-cloth with the food so you can see it sparkle in the mouth; when the queen, if she is in need of food, will take it (through the meshes) by reaching out the tongue, and thus she is kept in good condition for days, and sometimes weeks. Put a strange queen in this same cage, and she might die of starvation in a few hours. Yea, more, put plenty of food in the cage, so that no other bee save the caged queen can reach it, and the bees will so torment this strange queen, by getting hold of her legs and wings, and pulling at them, that she will rarely live a week.

But the thing that puzzles me the most is how the bees in a cluster, hanging down below the frames when wintering in the cellar, are fed through the 4 or 5 months they are confined therein. We are told that these bees are constantly changing, and that the ones which form the crust, or outer circle of such a cluster are going inside every few minutes or hours; warm bees from the inside taking their place, while these cold, hungry bees go in and feed and get warm, and thus the whole colony is fed and "clothed" during their stay in the cellar. But I have watched hours only to see those cold, stiffened bees stay right in that same position so still and quiet that any one would pronounce them dead, did they not know to the contrary. Who can tell us about this part of the matter?

Borodino, N. Y.

### Possibly a "New Kink" in Introducing Queens

BY ARTHUR C. MILLER.

It is passing strange how conservative humanity is, and sometimes it seems as if bee-keepers were more so than the rest. Now, there is the matter of queen introduction. With relatively few exceptions they all hold that odor is the governing factor in a queen's reception, and a queen must be caged in a colony until she has acquired the colony's odor before she can safely be released. The loss of so many queens by the cage method of introduction seems not to make the slightest impression on the holders of the theory. That queens can be scented with all sorts of odors, many of which do excite the bees to stinging (as the odor of a sweaty horse, etc.), and yet to be safely run into an alien colony affects them not at all. The negative evidence of the cage is of more weight than the positive evidence of the scented queen cordially accepted before their eyes. The blind following of ancestral practice is woefully out of place in this day.

The direct introduction of queens is the easiest thing in bee-culture, if one will only bear in mind the laws of bee-behavior, and conform thereto. It is far from a new practice, but owing to

the lack of knowledge of the underlying principles, it has not proved any more uniformly successful in the average person's hands than the cage system.

Without repeating the details of the "fasting" plan of direct introduction, as well as several others, a plan which has not yet failed will be given and an effort made to explain why it works.

A colony to receive a queen has the entrance reduced to about a square inch with whatever is convenient, as grass, weeds, rags, or a block, and then about *three puffs of thick, white smoke* (because such smoke is safe) is blown in, and the balance of the entrance closed. In from 15 to 20 seconds that colony will be roaring. The small space at the entrance is now opened, the queen runs in, and the space is again closed and left closed for about 10 minutes, then re-opened and the bees allowed to ventilate and quiet down. The full entrance is not given for an hour or more, or even until the next day. The queen may be picked from a comb and put in at the entrance with one's fingers, or run in from a cage just taken from the mails, her attendants running along, too. The results are all the same. The alien queen and workers are quite as much at home as are the real owners of the hive.

It makes no difference whether the receiving colony has just been de-queened, or has been queenless for several days, or even has laying workers, though colonies with such should be united with a normal colony. They are not worth requeening. But right here two conditions must be cited, or the bee-keeper not familiar with bee-behavior will experience trouble sometimes. Colonies with sealed queen-cells, or with a virgin queen, will sometimes "supersede" the new queen in a few days if that queen has been kept from laying for several days prior to her introduction. A queen taken fresh from the combs, where she was laying freely, will generally cause the destruction of the cells or the virgin.

To such colonies it has been found advantageous to give a comb with eggs and young larvæ just before running in the queen. The queen-cells may be looked for and destroyed or not, but so far as the writer has experimented, it is not necessary to destroy them, the bees attending to it. If, however, the colony is strong and honey is coming freely, a swarm may issue if the cells are not destroyed. More exhaustive observation is needed in this phase of it before it is wise to make positive statements. But with a virgin present the eggs and larvæ will make certain the new queen's favorable reception. The mere adding of eggs and larvæ to a colony with a virgin will almost invariably cause her disappearance. And it is impossible to ensure the safe introduction of a virgin to a colony having eggs and larvæ.

The loss of virgin queens in introduction is due chiefly to one or two causes, to the presence of eggs and larvæ, or to their running out. If to a nucleus in suitable condition a virgin is given near nightfall (because then all the bees are in), and the entrance plugged with a leaf or leaves, the queen will be safe. By morning, the leaves

will have wilted so the bees can get out, and matters proceed normally.

It is the writer's preference, in introducing laying queens, to dequeen the receiving colony immediately before running in the new one.

The theory of the cause of the results secured is this: Bees in distress, be they workers, drones or queens, know no enemy or alien, and each one is turning to some other for "help" or food, and every bee which comes within the influence of the uproar of a distressed colony seems to be seized with the same emotion. The bees, with the queen in the cage, as soon as they are placed at the entrance evince every sign of the same disturbance as shown by the bees of the colony, and it takes but a gentle puff to send them in.

The closing of the entrance after the queen is in is to ensure a complete distressed condition throughout the colony, and keeping it closed for the 10 or 15 minutes is to prevent too speedy relief. Also, if the full entrance is opened the bees may pour out in a mass and cause bother; while, by opening only an inch, few rush out before systematic ventilating is taken up.

The inexperienced and the thoughtless need to be cautioned as to two things, closing in a full colony that has no room to get into off of the brood-combs, and closing in a full colony sitting in the sun in the middle of a sweltering day. The skilled bee-master can do both of those things, but he does not do it if he can avoid it. And when he does it he stays right on the job keeping eyes and ears open.

The writer has run in hundreds of queens by various direct methods, and has found the foregoing to be the best. He believes it, as a whole, to be original with him. Its trial by all bee-keepers is urged, for it is considered good.

Providence, R. I.

### Saving Full Combs for Spring Feeding

BY EDWIN BEVINS.

For three or four weeks during the last of August and first of September no honey was gathered owing to dry weather. Frequent showers for a few days revived the pastures and ensured a heavy honey crop, but grain was damaged in the shock, as the days were very hot. The early crop of honey was very light, but I think the later rains ensured a fall flow of some magnitude.

I have had impressed upon me this season, and for two or three seasons before, the importance of having two sets of worker-combs for each colony of bees. Without these my honey crop this year would be almost nothing. The same is true of last year and the year before. Bee-keepers will, sooner or later, learn the importance of having a lot of combs filled, or partly filled, with honey for use in spring. Most of them, I take it, will be slow to adopt the methods described by Mr. Doolittle in his book, "A Year's Work in an Out-Apiary;" but by some means they should contrive to have a good many of these filled, or partly filled, combs. Their importance is manifest in the production of comb honey, but they

# American Bee Journal



MOVABLE-FRAME HIVE AND NATIVE HIVE PROTECTED AGAINST THE SUN'S RAYS IN TUNIS—(See page 205.)

are not without a large influence where extracted honey is produced.

I had enough of these combs, this season, to fill 12 or 15 hive-bodies, and these were, at the beginning of fruit-bloom, put on as many of my strongest colonies with excluders beneath. There is not enough fruit-bloom here to enable the bees to store much, if any, in these upper stories, and when it is over there is quite a long breeding period before white clover blooms.

The honey in some of the upper stories was all consumed at the beginning of the honey-flow, and in others it was only partially consumed. The upper stories, with little or no honey in the combs, were left to be filled with honey for extracting. The others were placed below, and the bees of the colony shaken in front, and the combs of brood put over weaker colonies and left to be filled with honey for extracting as fast as the cells became empty of brood. A comb-honey super was put over each shaken colony.

From these shaken colonies I got a large share of my comb honey this season, and from the colonies strengthened with 9 or 10 frames of brood I got the largest part of my extracted honey.

As I did not have hives full of combs with honey in them to put over all of my strong colonies at the beginning of fruit-bloom, I put a hive full of empty combs under the rest without using excluders. This was done to retard and prevent swarming, and to give plenty of room. At the beginning of the white-clover flow some of the lower stories had brood in them, and when they were taken away had quite a lot of bees which stayed with the brood and were given either a purchased queen or a comb with queen-cells from a colony that had swarmed.

There are some reasons, I believe, why the methods described by Mr. Doolittle, in his book, will not be generally adopted. Not many will take the

trouble to secure and carry over enough combs to supply many colonies. Then not many will take the pains to be sure of always having young queens in the colonies worked by this plan. Without young queens the plan will not be successful. Old ones are unable to be superseded before or about the beginning of the honey-flow, and swarming will very likely take place.

Mr. Doolittle's locality seems to differ with many others. I gather from a perusal of his work that he has honey stored in the upper stories during fruit-bloom; then he has a white-clover flow, and this is followed by a bass-wood flow. Most of us have to depend upon white clover, and therefore have to use some modifications of his methods.

Nevertheless it is a good thing for any bee-keeper in these northern lands to have a good supply of filled, or partly filled, combs for use in spring, as they can be turned to such good account for the increase of bees to take in the white-clover flow. And, besides, they save a lot of work in feeding.

Leon, Iowa.

## Care of Bees for Winter—Production of Extracted Honey

BY E. D. OCHSNER.

(This essay took second prize at the Wisconsin State Bee-Keepers' Association Meeting in February, 1912.)

We will start the year at the close of the honey-flow, which is with us after the first killing frost, and with a yard run for extracted honey. Pick out a day when cool or just warm enough so that all shaken bees may arise and get home, as hot days at this time of the year are dangerous and cause slow work.

Right here is where many who are

keeping bees in town get into trouble as a little robbing is a sure way to make bees angry, but if they should start robbing, just stop for a few minutes and look your yard over carefully and you will find some that are working nicely, and which, of course, are the guilty ones. Each should receive a wet cloth over the entrance, the robbers being let in from time to time, and then work may be resumed at once.

Take out all frames from the upper stories, and place them in empty hives on a wheelbarrow lengthwise. Lift your hive, and if there is not honey enough, take out the second frames from the outside, as that is where the honey should be, and insert a full frame there.

To feed right, and do it easily, take full frames that you should have had left from the last extracting of white honey, as the best is none too good, and a colony for outside wintering should have at least 20 pounds of honey, and be strong in bees. My colonies are all wintered in chaff hives, or packed in *shells* on the summer stands.

Do not shovel the snow from the hives in cold weather, as the bees will break the cluster, owing to the disturbance, and never get back; at the same time the snow will keep them warm and they will always settle away from the inside of the hive enough to give them air; but should the weather warm up enough to warrant a flight, they should have a bare place shoveled in front of each hive, say 4 to 6 feet square. Cover the snow with straw if possible and look over each colony to see that they can get out.

About the last of March or the first week in April each colony should be examined, removing chaff cushions, and if honey is in sight, and it is fair to strong in bees, place a honey-board on and then the cushion, as now is the time of year when they must be kept warm so that they may rear brood,



## American Bee Journal

and lots of it. Here is where the chaff hive pays for itself and extra work.

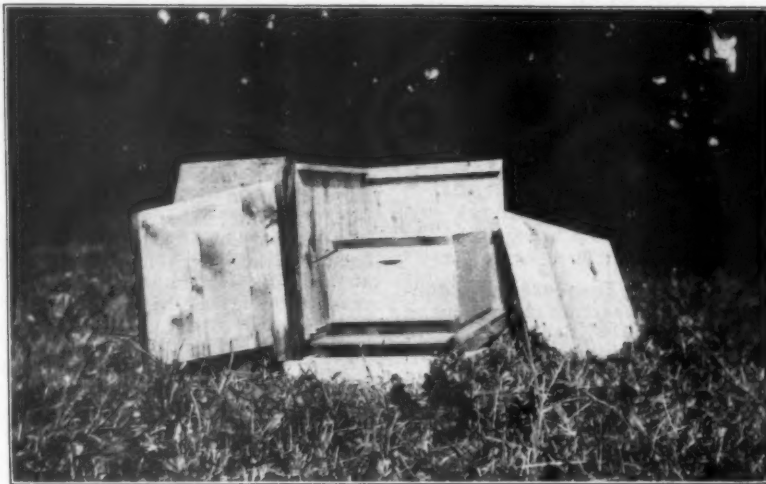
If a weak colony is found, go to an extra strong one, take a small frame of brood ready to hatch, and help the small colony. I find this pays if it is done right. The next time we go through, we help again if they should need it, and all fair to strong colonies should have brood spread to bring them up; the spreading frames to contain uncapped honey.

Before the colonies get any stronger, the clipping of queens should be done. I am a firm believer in clipped queens, at least when one has tall timber around the yard. All colonies are held back from swarming until honey is coming in. To do this all colonies that are strong enough should have an extra upper story in which to rear brood, but queens should be put down or taken away when the honey-flow starts in earnest, for, as a rule, our honey-flow is short, and there is not much of a fall flow. It is far better to take the queens away at the beginning of the crop, as eggs laid then will not hatch in time to make workers until the honey-flow is over.

No colonies are run for extracting without queen-excluding honey-boards, and when all have upper stories on, a frame of brood is put in each one to bait them. In removing queens to stop swarming, I kill all queens that are 2 years old, and make nuclei of all the yearlings that I can use for increase; these, by fall, will make good colonies.

The extracting is done as the honey comes in, and not left until the flow stops, as a little early fall honey may spoil your white honey in color. I extract it as soon as the honey is ripe, and do not figure on ripening it in a tank, as out-yards are not handy in that way. Honey should be  $\frac{1}{4}$  to  $\frac{1}{2}$  capped before it is considered ripe enough. The 1 and 5 gallon cans are the best in my market; 10-pound pails are good. All cans are filled while extracting, and marked with date and grade.

The dark or fall honey is not extracted, as you may need some for winter stores, for colonies run for extracting are, as a rule, empty in the brood-chamber, and what dark honey is left is



VIEW SHOWING DETAIL CONSTRUCTION OF THE FRANCE WINTER-CASE.

held over in the frames for feeding the following spring. Dark honey seldom granulates, and makes better food when the bees can fly than the white. Also feeding frames of honey is quickest and best on account of robbing.

A few words as to nuclei. I build them with the queens that I remove at the start of the honey-flow. Should any need help I give them some brood, as I have plenty to spare when the honey-flow is about over. I rear all my queens from cells started under the swarming impulse, or from a frame of fresh eggs, and keep no small or deformed cells. A small, inferior queen may cause the loss of the colony, for she dies, as a rule, the following spring, just when she is needed the most.

As to race of bees, the more Italians the better, but Carniolans are the best to make a strong colony in the spring, when you need bees the most. They are very good honey-gatherers, being large in size and gentle to handle.

Wisconsin.

### Rules for Winter Protection

BY FRANK F. FRANCE.

Not long ago in a Farmers' Institute the question was asked, "How many of

you cow owners are dairymen?" and I have thought many times that this question would apply to us bee-keepers. How many bee-owners are bee-keepers?

Taking the United States as a whole, how many people who keep bees out of every hundred understand the practical points needed to make a success? The answer, I am afraid, would not be a large figure.

Since the heavy loss of bees the past winter and spring, the wide-awake bee-keeper will study the exact cause of the loss and try to make it right for another such winter.

The future is a blackboard. You have the chalk.

Here are a few points by which we go here in the North: First, the colony must be strong in bees; second, it must have a good, young queen; third, it must have a full supply of honey; fourth, it must have winter protection if in a single-walled hive.

The best outside winter-case for single-walled hives I have seen yet is shown in the view of our home-yard of some 150 colonies in winter-cases fixed for winter and early spring. A 2-inch space is left on the sides and ends, and a foot space above the hive inside of the case walls. On top of the hive is placed a small cap of thin lumber, over this a piece of burlap, and then the walls and the top of the hive are packed with oats or clover chaff. The sides, ends and cover are separate pieces, so they can be removed and easily put out of the way for summer. Outside of the double-walled hive, this, I believe, to be one of the best outside cases.

In wintering bees in the cellar, the temperature must be kept at about 42 degrees, with plenty of fresh air. The entrances must be cleaned often of dead bees. We put the bees in the cellar about Nov. 25, and take them out, if the weather permits, the first week in April. About April 10, the soft maples begin to bloom, and the bees go wild after the maple pollen and sweets. This is a stimulant, and a great help to brood-rearing.

Let me mention the few rules again for successful wintering: All colonies must be strong with bees; they must have a young, vigorous queen; they must have a full supply of honey or honey syrup, and this must be strictly



HOME YARD OF N. E. FRANCE & SON, SHOWING 150 COLONIES OF BEES IN WINTER-CASES

# American Bee Journal

pure and without honey-dew; they must have good, dry, winter protection.

These rules hold good for such a winter as the last. We did not lose very heavily.

Platteville, Wis.

## Number of Eggs Laid by a Queen

BY DR. C. C. MILLER.

Schweizerische Bienenzeitung contains a very interesting article, page 257, written by Dr. Bruennich. He quotes Doolittle, without at all questioning his authority, giving 5000 eggs laid in a day by a queen whose colony however did not store so much honey as other colonies with queens less prolific. Dr. Bruennich thinks, however, that in America, where heavy yields are obtained, there must be a heavier drain on the strength of a colony, and so a greater amount of brood reared. Of course, he says, with this greater demand on the queen her life must be shortened, and so it is credible that in America a queen is no longer profitable in her third year, while in Switzerland she still performs in a satisfactory manner her maternal duties in her fourth year. (Dr. Bruennich, although they may be exceptional, there are not lacking queens here still doing good work in the fourth year.)

Last year he took numerous measurements of different colonies. He obtained the contents of each comb by multiplying together the two diameters of the ellipse of brood and then multiplying that product by .8. In his best colony brood-rearing began about Feb. 10. (This was no doubt outdoors, where brood-rearing begins earlier than in the cellar.) The amount of brood, small at first, remained moderate throughout March, ascended with great rapidity throughout April, and held its maximum throughout May. Then a rapid decline throughout June to less than half the maximum, continuing to decline less rapidly throughout July, increasing slightly to the middle of August, then declining rapidly from the beginning to the middle of September, when it ceased entirely. But the bees were fed in August, without which Dr. Bruennich supposes the decline would have been constant.

No doubt weather and pasturage had much to do in the case, and different years would give different results. The thing that will seem surprising to most readers is that at the height of her laying this best queen did not exceed 1600 eggs per day, although the colony was strong and stored a good surplus. The laying for the entire season is estimated at 160,000 eggs, and a half million for a lifetime.

May 21, when the brood was at its maximum, it occupied 79 square decimeters, or 1225 square inches. March 11 it was 14 percent as much; March 28, 29 percent; April 12, 32 percent; April 24, 60 percent.

### THE CURVED LINE OF LAYING.

In connection with this article Dr. Bruennich presents to the eye a striking picture of the varying of the queens' laying by means of a curved

line, which is here reproduced, and which needs no explanation. Along with it he gives the curves of the laying of two other queens. While there is considerable difference, the general outline of the three is much the same. This figure presents material for interesting study. The probability is that 9 out of 10, if not a larger proportion, have thought of the laying of the queen as much more nearly a straight line throughout the season, with an ascent at the beginning and a descent at the end. The most striking difference in the laying of the three queens is that while No. 13, the best queen, kept the brood up to its maximum the whole of May, Nos. 6 and 19 show a sharp decline in that month. Is it characteristic in general of the better queens that they will thus keep up

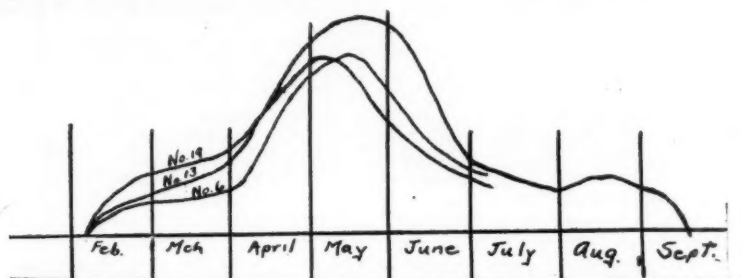


DIAGRAM SHOWING CURVED LINE OF LAYING.

their laying while others decline?

In this case there was evidently an early harvest with no fall flow. The feeding made a slight elevation in August. In case of an important fall flow, might not that elevation have been much greater and longer continued? The curve shown for No. 13 is no doubt the best for an early flow. If the brood-area had been kept up in June, it would only have meant an unnecessary number of consumers later on when there was no work to be done. Yet what about young bees for winter if the drop came too soon?

The probability is that when bees are left to their own devices the great majority of supersedures occur at or near the close of the harvest. Occasionally, however, a queen is superseded early in the season. In such a case the beekeeper may pat himself on the back with the thought that he need have no further concern about that colony for the rest of the season except to harvest the crop, since with that young queen reared in the hive there will be no thought of swarming before the next year. But if he is observant he will notice that he will also have very little trouble with harvesting the crop of that colony. It will be satisfied with a single super, if it even deigns to notice that, while other colonies will need several supers. The beginner will feel puzzled at this, for with a young and vigorous queen he will be likely to expect extra results. A study of that curved line will help to clear up the matter for him. If the life of a worker in the busy season be 6 weeks, even if there be no diminution of the brood-area until the first of June, there will be no diminution of the field force until the middle of July. In other words, to harvest the early flow, say

the white-clover crop, we are dependent upon the eggs laid in May, with perhaps some help from the last of April and the first of June. Bees reared in the first part of April will not live to see the harvest, yet they are of exceeding importance, for they are needed to care for the immense area of brood in May.

Now consider the cause of supersedure early in the season. That supersedure occurs because of a failing queen. If it occurs the last of May, the restricted laying throughout that month means a feeble force for the harvest. No matter how vigorous the new queen, her work comes too late to count on a white-clover harvest. "But," says the beginner, "I had one queen superseded the first of May, so that the new queen was in plenty time

to provide for the crop, yet that colony yielded almost nothing. Another queen was superseded early in April, and yielded still less. Surely, that was early enough, was it not?" In the first case the new queen may have done excellent work, but no amount of laying will be effective if there is not a sufficient force of nurse-bees to care for the brood, and the laying of the old queen had been so poor that the nurses were too few to allow the new queen to do much in May. In the second case the new queen was early enough, but for some reason queens reared so early are not worth their salt nine times out of ten. Fortunately it does not often happen that queens are superseded thus early.

### MEASUREMENTS OF BROOD.

Desiring to know how conditions in my apiary would compare, I took some measurements July 30. I followed his plan of measuring, and multiplied the length of the area of brood in each comb by its depth, and then multiplied that product by .8. In No. 10, a colony of very yellow bees but very poor storers, I found 1235 square inches of brood surface. In No. 13, a hybrid colony and one of the very best storers in the yard, there were 1373 square inches. I do not know how that compares with the amount of brood present in May, but I doubt if there was much more in May.

The remarkable thing in the case is the difference between Dr. Bruennich's measurements and mine. In Dr. Bruennich's best colony there were 1225 square inches of brood in May, and about 235 square inches July 30. It will be seen that my best colony had, July 30, nearly 6 times as much brood as Dr. Bruennich's on the same



# American Bee Journal

date, and 12 percent more than his colony when at its maximum in May.

It may be remarked in passing that 13 does not prove to be an unlucky number with Dr. Bruennich or me. No. 13 is his best colony, and my 13 one of the very best.

It should be mentioned that this year the season is exceptionally late, the latest I think I have ever known, and other years I might not find so much brood present July 30. As Dr. Bruennich says, and as every observant bee-keeper has found, the amount of storing done by a colony is not always in proportion to its strength or the amount of its brood. It will be noted that in my apiary No. 13 had only 11 percent more brood than No. 10, while No. 13 had 5 supers and No. 10 only 2, and I think No. 13 was more nearly crowded for surplus room than No. 10.

If nothing else is to be learned from these observations and comparisons, there is at least confirmation of the old saying, that bees do nothing invariably. Marengo, Ill.

## Bees in the City—Roof Apiary

BY AUGUST THOMMEN.

Some 5 or 6 years ago I read a book entitled, "Three Acres and Liberty," written by Bolton Hall, wherein it said, among other things, "Many people make a living by keeping bees, and if you have not a place for them in your backyard, put them on the roof." In the same book I also found the addresses of several bee-papers. I sent

downs with the bees. I had a swarm the first year, and lost some of my colonies through mismanagement, but every year I learned a little more about bees. Now I have 10 colonies, about all I can keep upon my roof.

The hives you see in the picture are double boarded, and made to hold 12 frames. So far, I have had very little trouble with swarms. As far as I know I have had only two, one the first year, and one early this spring. The hives are never taken down, but stay up there through the coldest winter. I never yet had any loss from the cold. The entrances of the front row face southeast, while the back row faces the roof. I notice that the back row always is much stronger in bees, and yields more honey than the front row.

This year, for the first time, the bee-inspector came to inspect the bees and see about foul brood. To my surprise there is foul brood in almost every beeyard in my neighborhood, with the exception of two or three, but I am glad to say that the inspector found mine all right.

This spring I had trouble with my young queens, some of them did not mate until after 4 or 5 weeks, and one proved to be a drone layer.

That essay written by A. C. Allen, in the August number, "How to Secure a Good Crop of Honey," is just the thing. Accidentally I did about the same thing early this spring, only in a little different way, and the result was fine. I never had stronger colonies than this year, and never more honey.

Paterson, N. J.



ROOF APIARY OF MR. THOMMEN.

for a sample copy of the American Bee Journal, and I think I hit the right thing that time, for I would not be without it as long as I keep bees.

The next spring found me with 6 colonies of bees on the back part of my roof. The colonies were all hived in very old Quinby hives, which I soon discarded for the regular Langstroth. It was not very much fun to transfer the bees, but I learned a whole lot by it. From then on I had my ups and

the college along with other industries and give open-air or field demonstrations, and thus place this pursuit on common ground with all other industries of merit. Bees were purchased, and, I am informed, have been kept on the college grounds ever since. But soon after the date of my lecture here, Mr. Anderson was elected to a seat in our National Congress, and practical bee-keeping has been omitted. I hope, however, that at no distant period it will receive its just and full share of attention among the industrial pursuits.

Not that it is meant that all the students of this college (some 1900 in number) are at all likely to become practical bee-keepers, for it is almost absolutely certain that they will not, nor are they likely to become sheep-raisers, swine breeders, or variety farmers, but it is very desirable indeed that all should possess a fair amount of knowledge of each industry engaged in by our people in every section of our great country. When thus equipped all will understand the needs of every other pursuit, and when legislative support is needed, the different State legislatures will be competent to give our needs intelligent consideration and action. Short of this they will not be able to do any pursuit justice except at great labor and expense of those who seek aid, and who must spend both time and money in giving the information wanted by our legislative assemblies.

I will also say that not all persons are physically adapted to bee-keeping, for occasionally a person is found who is susceptible to the influence of bee-sting poison, so much so that their lives are in danger when stung by honey-bees. I knew of a case in which a single bee-sting produced death within 15 minutes. But such occurrences will probably not average one in a hundred thousand, so that, as a rule, there is more alarm when a person is stung by these insects, than has a real foundation in actual danger. I have seen the time when one bee could have chased me over an entire school district. In fact, I remember that a full battery of Confederate cannon were firing at us in Texas, during the Civil War, and I felt much less alarm than I have felt by a single honey-bee.

In time I was given a practical lesson in the matter of being stung.

In Kansas the acreage of alfalfa is rapidly increasing, as well as fruit-bloom and other honey-producing flowers. Alfalfa is one of the greatest honey-yielding plants in all the Great West, and in one instance a bee keeper informed me that he had taken 350 pounds of extracted honey from one 10-frame 2-story hive, all of which had been gathered by one colony of bees.

In view of the foregoing facts let our educational institutions give our young men and women a fair share of knowledge in this branch of industry along with others, and thereby rid it of that midnight darkness which has hitherto kept it in the back-ground.

In the matter of handling bees, as we sometimes see them handled on Fair grounds in cages, without the operator getting stung, it is necessary only to alarm the bees by blowing smoke

## Habits and Value of Bees

Delivered at Kansas State Agricultural College

BY DR. G. BOHRER.

Some 34 years ago I delivered a lecture on the habits and management of honey-bees before the students of this college, at the request of Prof. John Anderson, then in charge of this institution. He informed me that it was the intention to teach bee-keeping at

# American Bee Journal

freely into the entrance of the hive, as the bees will at once begin to fill themselves with honey from their stores; at the same time light drumming on the hive will add to their alarm. In 10 minutes they will have loaded themselves with honey, and when in this condition they never act on the offensive, but are in the passive state, acting on the defensive only, and can be handled without danger of being stung, except as they are pinched or hurt, when they will defend themselves.

Those who handle bees on Fair grounds should explain how they subdue them in preparing them to be handled; without this explanation such exhibitions are not in any way instructive,

but rather a deception, as the bystanders are left with the impression that the operator possesses a hypnotic or mesmeric influence over bees, which they think but very few persons possess. Such exhibitions are frauds, and should not only be condemned, but should be excluded from all Fairs.

As standard authorities upon the habits and general care of bees, I will recommend the works of the late Rev. L. L. Langstroth, and of Prof. A. J. Cook, of California. There are other works of merit, but none better for the beginner in bee-keeping, and there is no better hive for general use than the Langstroth 10-frame hive.

Lyons, Kan.

entirely clear, however, from what you say, whether this was not a case of regular swarming rather than supersedure. In any case you did well to do as you did.

2. Yes, she would no doubt be more ready to believe an entomologist than an interested bee-keeper.

3. Of course, the treatment will be all the same whether your bees or the bees of others produce the honey. But heating the honey will keep it from candying only temporarily, unless the honey be sealed, and sealing is not commonly practiced. You will do well to inform your customers how to liquefy the honey when it candies, and it is well to have labels that give that information. Very rich, well ripened honey gives less trouble about candying than that which is taken too soon from the hives.

4. Opinions differ. Some think it better to get the new queen in immediately upon the removal of the old one. Others think it better to let the bees continue queenless for some time. My own experience has been that it is desirable to have the new queen for some time caged in the care of the bees before she is freed. Perhaps it is because this allows the new queen to acquire the hive-odor. In Europe it is more or less the practice to cage the old queen in the hive for a day or so before removing her, and then to put the new queen in the same cage. Some prefer to cage the new queen in the hive 2 or 3 days before removing the old one, then allowing the bees to get at the candy to release the new queen.

5. That depends. If you ask the question now, I would answer that the present is an excellent time. But if you should ask me next spring I would not advise you to wait until fall. If your object is to introduce a queen of new stock, so as to improve your stock—and that is quite generally the object—you will gain by introducing her this fall; for in the spring she will be established in her colony, ready for you to breed from her as soon as conditions will allow. If you are introducing a queen of your own rearing, merely to replace one of less value, there is no better time than toward the close of the honey-flow. That is the time when most of the superseding is done by the bees, and interferes with storing less than at other times.

## Keeping Nuclei Always on Hand for Replacing Poor Queens

I have noticed Doolittle saying that one ought to have nuclei growing most all the time in order to supply queens, or better queens whenever necessary. It seems awkward to have so many hives as lots of nuclei would require; they might grow to full colonies. Seemingly a person would require many special colonies for nuclei. Do bee-keepers, while using Hoffman frames, have three and five-frame hives for nuclei? What I want to do is to see the way clearer for the most expeditious supply of queens to inferior colonies, as could be practiced by always having a few nuclei on hand. I tried to rear queens as per issue of August, 1912. I put frames with 4 V-pieces of foundation into fine colonies, but in 4 days they had these frames so filled that I could scarcely tell them from the rest.

PENNSYLVANIA.

ANSWER.—Doolittle is quite right that we should have on hand queens to replace those that are not up to the average; and the only way we can do that is to have them in nuclei. That does require, as you say, a good many hives and stands. But you cannot have anything of much value, as a rule, without its costing you something. They will, as you say, grow into full colonies; but that is quite commonly what we want. It is easy to keep down their strength. If you have half a dozen nuclei that are stronger than you want, all you need do is to build one of them up into a full colony by taking bees and brood from the others.

One way to avoid having so many nuclei—or rather to have nuclei in so many hives—is to have more than one nucleus in a hive. At one time I practiced quite successfully having 6 nuclei in one 10-frame hive. Each nucleus had only one comb, and as the partitions were only about five-sixteenths thick that allowed a pretty wide space for each comb. When a nucleus became pretty strong it would build comb at the sides, which I would have to cut out. But this is better than to have a narrower space, for bees did not swarm out of these nuclei, and when I afterward gave a narrower space for the combs they swarmed out quite too often. The entrances to the 6 compartments were arranged so that there was little danger of a queen entering the wrong entrance. The

## DR. MILLER'S



## ANSWERS

Send Questions either to the office of the American Bee Journal or direct to  
DR. C. C. MILLER, MARENGO, ILL.  
He does NOT answer bee-keeping questions by mail.

### Disposing of Capping Washings

1. Is there any chemical or other article which can be mixed with the washings of wax or cappings to be thrown out that will not attract the bees?

2. How can I dispose of water which is a little sweet so as not to have the bees bother? OHIO.

ANSWERS.—1. Carbolic acid would, no doubt, be effective.

2. I have never paid any attention to it, for if it is thrown into a drain or upon the ground it is so diluted that it disappears before the bees pay any attention to it. If you find the bees trouble in that way, you could add more water to it before throwing it away, so as to make the sweetness very slight, and then if each time you throw it on a new new place on the ground, I think you will have no trouble. The reason for extreme caution in the matter is the fear that there might be foul brood in the honey. You might make a sure thing of it by having a pit dug, into which you would throw the washings, and have the pit covered well.

### How to Keep Moth Out

How can I clear a colony of bees of moth and then keep them out? CALIFORNIA.

ANSWER.—Prevention is better than cure. The best preventive is a big lot of bees in the hive. Italians are better than blacks to keep moth at bay, and if your bees are very much inclined to black, you will do well to introduce Italian blood. Even a weak colony of Italians will keep down the moth. A queenless colony is likely to be troubled by the moth. With strong colonies of Italians and no queenless colonies you can whistle at the moth. But if you have a colony where the "worms," as the larvae of the moth are called, are pretty bad, you may do a little to help. You will see the gallery of the miscreant running along the surface of the comb. Take a pin or a wire nail and prick into one end of the gallery. Then prick into the other end and tear open the gallery, and thus drive the worm toward the other end, where he will come out, and you can dispatch him. Don't allow pieces of comb, or combs in hives without bees to be lying around as breeding places for the moth.

### Handling Caucasian Bees

I desire to make enquiry to the best method of handling Caucasian bees in New York State. I have read in the American Bee Journal that they will fill up as much as 10 frames in a hive-body with brood. In this case, how would you manage this in the spring? In the fall would you advise wintering them in one or two stories? NEW YORK.

ANSWER.—The probability is that you will

find that Caucasians need no treatment different from other bees. You will find bees other than Caucasians that will keep to frames filled with brood, and you are not likely to find that all Caucasians will do it. A colony that will keep more than one story filled with brood early in the season, whether Caucasian or any other, should have a second story given, unless you want to draw brood from it to give to weaker colonies. Then when harvest time comes it should be reduced to one story, any surplus frames of brood to be distributed where they will do the most good.

In the fall you will likely find that of their own accord they will reduce the brood-nest so that one story will satisfy them.

### Supersedure of Queens—Miscellaneous Questions

1. What causes supersedure when everything apparently looks in good condition. Sept. 2 I had a swarm go out, and upon examination of the hive I found that they had superseded their queen (which was of this year's stock), and there were also four other virgins in the hive. I knew it was too late for a profitable swarm, so I pinched the heads off of all but one queen, destroyed all remaining cells, and then put the swarm back in the same hive. Was this right? Everything is going along smoothly at this date (Sept. 15), and the new queen is laying.

2. One of our neighbor's is complaining that the bees destroy her grapes and sting her peaches. What solution would you give her? If I explain to her that bees do not destroy sound fruit, etc., no doubt I will not be believed, because I am the owner of the bees. Would you refer her to the State Entomologist?

3. I am purchasing 300 pounds of extracted honey to be put up in one-pound glass jars and 5-pound pails. Should the pails, jars and honey be heated the same as if the product came from my own extractor? The idea is to keep it from candying.

4. In requeening an apiary would you advise introducing the new queen (that is caging her in the hive to be requeened) immediately after killing the old one, or would you kill the old queen and then wait 3 or 4 days to allow the bees time to start queen-cells, then go over the frames and cut out the cells? If a cage containing the new queen is put into the hive immediately after killing the old queen, isn't there danger of the bees building queen-cells, and then when they release the new queen ball her and continue with their cells?

5. What time of year is best to requeen? NEW JERSEY.

ANSWERS.—1. You ask what causes supersedure when everything apparently looks all right. That "apparently" is probably the answer. A queen may be in some way at fault, whether a few days or a few years old, and you may see nothing wrong, but some way the bees know about it. It is not



# American Bee Journal

entrances of No. 1 and No. 6 were toward the back end of the hive at the top, just a hole  $\frac{1}{2}$  or  $\frac{3}{4}$  inch. For No. 2 and No. 5 a hole was made in the bottom and a passage channeled out to emerge at the side of the hive, at the bottom, near the front end. No. 3 had an opening at the usual place for the entrance in front. No. 4 has its entrance at the back.

After I changed to 8-frame hives, I used 3 nuclei in a hive, a 1-frame nucleus in the center with an entrance at the back, and at each side a nucleus of 2 frames, sometimes with entrances in front, at each end. But of late I have mostly used a full hive for each nucleus, generally having 3 frames in a hive, although sometimes 2, and sometimes 4 or more. That made it easier to build up each one into a full colony than to have more than one nucleus in a hive.

I think bee-keepers generally use their regular hives for nuclei, except those who make a business of rearing queens to sell.

You will find it easier to get your combs built out in good shape for cells if you have them built in nuclei rather than strong colonies. Still, you can get just as good cells with combs built as yours were.

## The Foul-Brood Law

Is it a fact that one of the greatest aims of the present foul-brood law is to get rid of the farmer bee keeper and have bee-keeping go into the hands of specialists and raise the price of honey? ILLINOIS.

ANSWER.—I think I am quite familiar with all the arguments that have been used in favor of securing foul-brood laws, both in this country and other countries, and in no single instance have I ever heard it suggested that a foul-brood law would get rid of the farmer bee-keeper. I have heard it suggested that supply dealers wanted a foul-brood law so that hives of diseased colonies would be destroyed and new hives might be bought. I need not tell you what a foolish idea that is. It certainly cannot keep company with the idea that foul-brood laws drive farmers out of bee-keeping; for if they have that effect it would simply be destroying just so many customers for hives.

The aim of the foul-brood law is to restrict and to overcome as much as possible the ravages of foul brood. How would it drive a farmer, or any one else, out of the business? Suppose a careless bee-keeper with a few colonies has foul brood. If he lets the disease alone, as he is likely to do, it's a dead-sure thing that it will not be a very long time until his bees will be wiped out. Now suppose a foul-brood inspector comes along and obliges him to clean up the disease. Isn't that the only thing likely to make him continue in the business? Here's the way it looks to me: The foul-brood disease, left to itself, is sure to drive the careless bee-keeper out of the business; the foul-brood law is the only thing to keep him in business.

## Rearing Queens—Who is Inspector?

Next spring I intend to rear a few queens for sale, but I saw an article in the Bee Journal stating that any queen-breeder must have a certificate from a bee-inspector. I have kept bees here for quite a number of years, and a bee-inspector has never called and inspected my apiary. I do not know whether there is any inspector in Oregon. Where could I find out about such bee-inspector, and is this inspector paid by the State or is the apiarist to pay such cost? OREGON.

ANSWER.—My impression is that there is no inspector in Oregon, but I may be mistaken. It certainly is awkward to require inspection if there is no inspector. Generally an inspector is paid out of public funds. If you are a member of the National, the Secretary or General Manager can probably give you more positive information than I can.

## Larger Hives for Carniolans

I have some Carniolan bees in 8-frame hives. If I had them in a larger hive would they swarm less? Can I get surplus honey in a bigger hive; that is, if I have a bigger brood-chamber? I like the Carniolan bees; they stand the severest winter and breed up faster in the spring. They gave me a nice surplus of honey early in the season, two supers to each colony. With all the swarming I had, and with 8-frame hives, I sold the honey as No. 1, and got a good price for it. I have some colonies that will give 4 supers, and this is not the best honey year for Illinois, either. ILLINOIS.

ANSWER.—Yes, a large hive will reduce

the probability of swarming, since a crowded condition of the brood-nest is one of the chief factors in producing the swarming fever. Neither will a larger hive take away your chances for getting surplus. Formerly I used 10-frame hives, and changed to 8-frame hives chiefly because it was the fashion. If I were to start in afresh I would study some time before I would decide to adopt the smaller hive. With the larger hive I got fine crops of beautiful sections, and you can do the same.

## Honey from Cappings as Feed—Dark and Light Cappings

1. Is the honey left in the cappings good feed for the bees after it is heated in the solar wax-extractor? Will it cause dysentery?

2. Why is an old, dark comb always sealed dark when the one at the side, if new or light, will be sealed light?

I think a great deal of your columns in the American Bee Journal. IOWA.

ANSWERS.—1. Yes, unless heated so as to be actually burned—a thing not likely to happen—it ought to be wholesome food for them.

2. You will find that not only is the dark comb sealed dark, but the light comb beside it is likely to have its sealing darkened to some extent. Years ago I used wide frames for sections, the wide frames holding 8 sec-

filled with empty combs, less one of the center ones. Next, a comb containing a patch of unsealed brood about as large as the hand, is selected from the colony and placed in the vacant place in the new hive; a queen-excluder is put on this lower story, and about this a super of empty combs, this one having an escape hole for drones; and, on top of all, an empty super. A cloth is then nicely placed in front of this new hive, on which the bees and queen are shaken from the combs of the parent hive, and the third story is filled with the combs of sealed brood and brood too old to produce queens, and allowed to remain there and hatch, returning to the working force.

This is really the Demaree plan, which was given to the public many years ago, by G. W. Demaree, a prominent Kentucky bee-keeper at that time. Mr. Allen has varied it by putting a frame with some brood in the lower story, whereas I think Mr. Demaree had only empty combs, or combs with starters in the lower story. Mr. Allen's variation is of value, for I think there were cases reported in which the bees swarmed out with no brood in the lower story. Mr. Demaree put all the brood in the second story, while Mr. Allen puts it in the third. I don't know which is better.

Mr. Allen says "the third story is filled with the combs of sealed brood and brood too old to produce queens." I hardly understand that, for he says nothing about putting brood elsewhere, and generally



INTERIOR VIEW OF JAPANESE BEE-MEETING—(See front page.)

tions, so that they were the same size as brood frames. As a bait to induce the bees to begin work promptly in the super, I practiced taking a frame of brood from the brood-chamber and putting it in the super, a frame of sections facing it on each side. It was effective in starting work promptly in the sections, but if at any time I left it until the bees began to seal the sections they were sure to seal them dark. The explanation is that the bees are in the habit of carrying bits from the old combs to help in the sealing. That explains why it is best to have sections at some little distance above the top-bars. You will find that sections built over top-bars  $\frac{3}{8}$  inch thick will be darker than if built over top-bars  $\frac{1}{2}$  thick.

## Allen's System of Swarm Prevention

Will you please explain Mr. Allen's system of swarm prevention, as he says in the August number of the American Bee Journal for 1912, that he gave it to the readers of the Bee Journal two years ago. If it really has any merit, will you kindly reproduce it in the journal. CANADA.

ANSWER.—If you will turn to page 94 of the American Bee Journal for 1910, you will find the plan as given by A. C. Allen, which is as follows:

"When the honey-flow is well started I go to each strong colony, regardless of whether the bees desire to swarm or not, and remove it from its stand, putting in its place a hive

most of the combs would have at least some very young brood.

The plan is a good one for extracted honey, but not available for comb.

## "Slaughter of the Innocents"

Why do some of my colonies throw out a lot of young bees in all stages of development, some dead and some alive? Yesterday I could have picked up a handful in front of a hive belonging to a neighbor. Why should they "slaughter the innocents"? The writer has much more enthusiasm than experience in bee-culture, but finds it very interesting; your department of the American Bee Journal especially so. IOWA.

ANSWER.—"The slaughter of the innocents" no doubt occurred because the innocents were "no account" innocents; that is, they were drones. When the harvest is over, or when there comes a serious break in the harvest, the bees seem to conclude that they can hardly afford to support a lot of gentry who do nothing to earn their own livelihood, so the poor drones have to go. It is common to say that at such times the workers kill the drones, stinging them to death. I think such an opinion is the result of superficial observation. I never saw a worker sting a drone. It is possible that such a thing may happen, but I think it must be a very rare occurrence. Many, many times I have seen workers driving drones, seeming to be biting them and trying to sting

# American Bee Journal

them; but it appeared rather that they were pretending to sting. When one worker stings another you do not need to watch very long before you see the stung worker curl up and die. I never saw a drone have this appearance after a worker had pretended to sting it. If I am rightly informed the workers, aside from teasing and driving the drones, merely withhold food from them, and they die. For a drone cannot, like the workers, live by helping itself to the stores in the cells, but must be fed partly digested food by the workers.

It is possible that you may say that there was no failure of the harvest. Well, sometimes it happens that individual colonies do not wait for the general slaughter, as it is called. After a colony has swarmed, the old queen having gone off with the swarm, the young queen in the mother colony becomes fertilized ready for laying. After

this there is no further need of drones for the current season, and they meet their fate.

Whether the driving out of the drones occurs at one time or another, not only does the colony become rid of the flying drones, but all drone-brood is destroyed by the workers.

You will do well to prevent the rearing of these drones in all but a very few of your best colonies. Even one colony in a hundred will rear enough drones to do for the whole apiary. If there is no drone-comb in a hive, there will be no drones. You can cut out any drone-comb and put in its place patches of worker-comb or of worker foundation. Some, however, think it is well to satisfy the bees to the extent of leaving them one or two square inches of drone-comb. You can behead these drones in the comb after they are sealed over, or sprinkle a little salt on them before they are sealed.

of the other books, but says three times as much as another book. Everything is short and sensible, and comes right down to the point; therefore, I think the public will like this book the best.

JOHN PASHEK.  
The Dalles, Oreg.

## Poor Crop in the South

There was but little honey produced in this part of the country this year. I believe that it has been the poorest year for bees and honey that I have ever seen in any place. Broom corn, corn and the hay crop were very good. The cotton crop is being cut short on account of the extreme drouth that we are having.

I believe that I have taken the American Bee Journal for 35 years or more. There have been many changes since that time. Many pioneers in bee-keeping (among whom was my father) have passed away during that time. Best wishes for the success of the "Old Reliable." W. C. NUTT, Treas.  
Texas.

## Rain in California

California has had quite a surprise, and something very unusual. Rain fell here Sept. 3, and a good, heavy rain today. In 26 years rain has fallen only nine times in summer prior to Sept. 3, and the last time we had rain before the date mentioned was in 1906. The rains will do great damage to the prunes and raisins, but will be of benefit to the bee-keepers.

The alfalfa blossoms are now yielding nectar, and the extractors and the bee-men are busy, but not up to expectations.

JOHN C. FROHLIGER.  
Berkeley, Calif., Sept. 5.

## Prospects in Iowa

Continuous rains here give promise of a flow of honey from hearts-ease for the first time in four years. There seems also to be considerable white clover in bloom, and I have already seen bees on a few blossoms.

Sweet clover was the great stand-by this summer. There was an abundance of it in this vicinity, which yielded well. However, if there is any surplus put up it will be from now on, so far as I know. A. F. BONNEY.  
Buck Grove, Iowa, Aug.

## Dividing Decreases the Amount of Honey Stored

My bees did fairly well this summer, and did not swarm at all; but I divided and doubled the number of colonies I had and got some surplus honey. P. A. NORMAN.  
Puyallup, Wash., Aug. 23.

## Glowing Report from Kentucky

I have colonies that have given me 114 pounds of comb honey this year, and will give me at least 50 pounds more. I have been working with bees 35 years. Visalia, Ky., Aug. 25. G. W. CHEESMAN.

## Fall Flow Good

Bees are booming on fall flowers. Have 600 colonies in about the same condition as last year. Good, big prospects. Bees want to swarm. F. B. CAVANAGH.  
Hebron, Ind., Aug. 24.

## Large Crop

There has been a large honey crop here, both early and late honey, and bees are in fine shape. E. E. MOTT.  
Glenwood, Mich.

## An Off Year in California

This has been an off year for California. Only 8 tons of honey from 500 colonies. GOLDEN RULE BEE CO.  
Perris, Calif., Aug. 20.

## Some Fall Honey in Missouri

Bees no good all summer; no clover, but since the rains they may gather some fall honey. H. MANSPERGER.  
Lewistown, Mo., Aug. 10.

## GINSENG AND GOLDEN SEAL

Grow those valuable plants. They go well with bee-keeping. Write me for prices on Seeds and Roots. F. GENT, Rockford, Minn.

## REPORTS AND EXPERIENCES

### The Value of a Bee Journal

When I took up bee-keeping I read every thing I could find on the subject with the hope of finding some system of management that would suit me and my environments. Needless to say I did not find it, but by picking up an idea here and yonder from the experience of others as given in the bee-papers and from observations of my own, I was able to evolve a system of my own that suited me. Then, a few years later, I moved about a thousand miles, and the first season showed me that my system was not good in my new location. I was up against the question of how to prevent swarming, make a reasonable amount of increase, and get a crop of honey while operating out-yards. I had to either solve that question or quit.

I read everything on the subject that I could find, and finally by combining the systems of two prominent writers, with some ideas I had gained by experience, I evolved a new system of my own that I am still following. It has been worth more to me than the subscription price of all the bee-papers published in America will amount to as long as I live. That is just one instance. I am constantly picking up new ideas that I consider worth all the papers cost me.

And if I knew all there is to be known about bee-keeping, I should still want the papers in order to keep in touch with other bee-keepers and see how they are getting along, their prospects, successes and failures, hopes, etc. I should want to know about markets, about legislation, favorable or unfavorable to bee-keeping, and about diseases of bees and the manner of treatment for them, and all the news of the apicultural world.

When a man says he has no time to read bee-papers, it simply means that he has lost all interest in bee-keeping. It does not necessarily mean that he has found the pursuit unprofitable, but that he has become interested in something else. I do not have time to read agricultural papers or medical journals, and yet I know farmers and doctors who are making more money than I am. I do not read those papers for the reason that I am not directly interested in those pursuits. When a subscriber tells you he has no time to read bee-papers, you might just as well tell him "So long. I wish you success in your new vocation." It never was intended that we should all be bee-keepers or all farmers, or all doctors, and a man is liable to change his vocation and acquire new interests to the exclusion of old ones. H. D. MURRY.

Mathis, Tex.

### Not All Illinois Reports this Good

Bees are doing fine. I have one colony that was treated for foul brood the first of June. It has filled 9 supers of 24 sections each. FRANK HINDERER.

Frederick, Ill., Sept. 9.

### Another Bad Report from California

Our honey crop is again a total failure in this locality. The condition this year has been the same as two years ago. My 80 colonies of bees made about 500 pounds of comb

honey. Some bee-keepers south of here lost half of their bees by starvation. One traveling salesman and farm produce buyer, who has traveled through the central coast country, told me that there was practically no honey in the country, and that the bees were dying at an alarming rate, generally from starvation. B. SCHNUCKEL.  
Lone Oak, Calif., Aug. 30.

### Seeking a Bee-Location

I made tracks in the snow last winter seeking a bee-location. I went towards the South. It was 40 degrees below zero at Great Falls, Mont., 27 at Edgemont, S. D., 17 at Liberty, Nebr., 7 at Anderson, Mo., and 3 below at Sarcy, Ark. As I stayed there a week, I made tracks in the mud after that. But I did not remain in the South, as I found too many bees for the pasture in the localities visited. In June I returned to this place. As I traveled by day only, I noticed the change in bloom from one place to another, and the great variety of flowers.

I believe that, from Ogden, north to this place is the best bee-country. But in many spots too many bees are kept.

Looking for a country where milk and honey flow, you will say. Sure, and I have found it, too. They flow in the irrigation ditches and make the land sell for \$200 per acre, even where the wild sage brush still grows.

However, some good bee-men spoke about the land boomers in the American Bee Journal. He told the truth, and the truth has not been half told for much of the western irrigated land is a delusion or a fraud. Come and see before you sell out in the East.

White clover does well here. As to alfalfa, our seedsmen here sold 5 tons of seed in 1912 so far.

There will be half a million tons of alfalfa hay cut up within 20 miles of Rupert, Idaho. Thousands of stacks are in sight. In field corners along the ditch banks, there is plenty of bloom which cannot be cut down. Then there is alsike clover, sweet clover, and white clover in pastures. Here wild alfalfa, dandelion, rabbit brush and willow is the wild flora. There are no trees for stray swarms; another good point. Where bees are plenty, honey is found, but where too many bees are, honey becomes scarce. So a good bee-country is not always best for bee-men.

I enjoyed and endorse what Mr. Bver said about former Editor York. But York's wish about Dr. Miller, "May he enjoy another twenty years," seems too short. It made me feel sad. Better send him a handful of flowers now, however, than a basketful when he is gone. L. W. BENSON.

Rupert, Idaho, July 25.

### A Good Bee-Book

I received a copy of "First Lessons in Bee-Keeping," and I must say it is just the right thing for a beginner or a more advanced bee-keeper. What I like about it is, if a person wants to find out about something he doesn't have to read 10 or 4 pages before he finds what he wants, as in some of the other books. It has less pages than some



# American Bee Journal

## Wants, Exchanges, Etc.

[Advertisements in this department will be inserted at 15 cents per line, with no discounts of any kind. Notices here cannot be less than two lines. If wanted in this department, you must say so when ordering.]

### BEES AND QUEENS.

FOR SALE—Untested Golden Italian Queens 50c each. J. F. Michael, Winchester, Ind. 8Azt

FRONT LINE Italian Queens by return mail at 75c each, 6 for \$4.25, 12 for \$8.00, 25 and up 60c each. J. B. Hollopeter, Pentz, Pa.

GOLDEN Italian Queens, Nuclei, and Full Colonies. See price-list in May number, page 131. Isaac F. Tillinghast, Factoryville, Pa.

GOLDEN QUEENS that produce 5 and 6 band bees. Untested, \$1.00; Tested, \$3.00. Robert Inghram, Sycamore, Pa.

FOR SALE—Three-banded Italian Queens bred for honey, gentleness, and prolificness. One, \$1.00; 6 for \$5.00. Wm. S. Barnett, 7Azt Barnett, Va.

MY SYSTEM—Union bee-hive and Queen. Will increase both your colonies and honey crop, and improve your stock, making bee-keeping a real pleasure. Cash orders \$10.00. 3Azt Joe Egner, Box 552, Laverne, Ill.

GOLDEN QUEENS that produce Golden Workers of the brightest kind. I will challenge the world on my Golden and their honey-getting qualities. Price, \$1.00 each; Tested, \$2.00; Breeders, \$5.00 and \$10. 7Azt J. B. Brockwell, Barnett, Va.

QUEENS—Italians and Carniolans. Will exchange choice queens for bees by the pound, frame, or hive. Write, stating what you have. Frank M. Keith, 3Azt 83½ Florence St., Worcester, Mass.

QUIRIN's famous improved Italian queens nuclei, colonies, and bees by the lb., ready in May. Our stock is northern-bred and hardy; five yards wintered on summer stands in 1908 and 1909 without a single loss. For prices, send for circular. 3Azt Quirin-the-Queen-Breeder, Bellevue, Ohio.

FOR SALE—Italian queens bred from the best honey-gathering strains obtainable. Untested, 75c; Select, \$1.00; Tested, \$1.25; Select Tested, \$1.50; Nuclei without queen, 1-frame, \$1.50; 2-frame, \$2.00; 3-frame, \$2.75. For queens and nuclei in quantity lots, and bees by the pound, write for prices and circular. Robert B. Spicer, Wharton, N. J.

GOLDEN and 3-band Italian Queens (strictly free from disease). Tested Queens, \$1.00 each; 3 for \$2.75; 6 or more, 85 cts. each. Untested, 75c each; 3 Queens \$2.00; from 6 to 50, 55 cts. each. Bees by the pound, \$1.00. Nuclei, per frame, \$1.25. Safe arrival and satisfaction guaranteed. C. B. Bankston, 2Azt Buffalo, Leon Co., Texas.

CARNIOLAN QUEENS—Bred from best imported stock. Many colonies can be manipulated without the use of smoke or veil. Untested, one for 75c; six for \$4.25; twelve for \$8.00. Tested, one for \$1.00; six for \$5.00; twelve for \$10. William Kernan, Rt. 2, Dushore, Pa.

FOR SALE.—50 colonies of bees in 8 and 10 frame Langstroth hives. If sold, must be shipped in November. Colonies are all strong and hives well filled with winter stores. No disease. Price will be low, as I have more bees than I am able to handle. Write for what you want, and get further particulars and prices. 10Azt Edwin Bevins, Leon, Iowa.

### SUPPLIES.

FOR SALE—A full line of Bee-Keepers' Supplies. Agents' prices. Save freight. Dreamland Farms, Buckingham, Fla.

FOR SALE—Empty second-hand 60-lb. cans 25 cts. per case of two cans. 100 for \$22.50. 7Azt E. R. Pahl & Co., Milwaukee, Wis.

ALUMINUM HIVE NUMBERS 1¼ in. high, 2c each figure; 500 or more, 1¼c. postpaid, including brass nails. Henry Benke, Pleasantville Sta., N. Y.

ORDER IDEAL WINTER CASES now, and be ready for the stormy days. Extracted honey taken in exchange. R. H. Schmidt, Rt. 3, Box 209, Sheboygan, Wis.

### HONEY

HONEY FOR SALE—Clover honey of the finest quality in new 60-lb. cans at 9 cts. per pound. 8Azt J. P. Moore, Morgan, Ky.

WANTED—Comb, extracted honey, and beeswax. R. A. Burnett & Co., 6Azt 173 S. Water St., Chicago, Ill.

FINE WHITE and light amber alfalfa honey put up in any size of tin packages, any quantity. Dadant & Sons, Hamilton, Illinois.

CHOICEST THICK RIPE CLOVER HONEY in full-weight 60-lb. cans at 11c per pound. Sample mailed for 8c. E. W. Brown, 10Azt Box 17, Willow Springs, Ill.

WANTED—Choice extracted white and amber honey in barrels or cans. Send sample, and price delivered f. o. b. Preston. 11Azt M. V. Facey, Preston, Minn.

### MISCELLANEOUS

MAKE PURE, delicious fruit acids from honey. Cures all diseases, man or beast. Patent allowed. Mailed, 25 cents. 1Azt C. W. Dayton, Chatsworth, Calif.

## Better Fruit

Published at HOOD RIVER, OREGON,

is the best, handsomest and most valuable fruit growers' paper published in the world. It is handsomely illustrated and shows the Western methods which have been so successful in winning high prices.

Subscription Price \$1.00 Per Year in Advance

Sample copies upon request.

### Better Fruit Publishing Company

HOOD RIVER, OREGON.

"A Year's Work in an Out-Apiary" is the name of a booklet by G. M. Doolittle, the well-known honey-producer of New York State. He tells how he secured an average of 114½ pounds of honey per colony in a poor season. It is fully illustrated, and tells in detail just how Mr. Doolittle has won his great success as a honey-producer. The price of the booklet is 50 cents, postpaid, but we club it with the American Bee Journal for a year—both for \$1.30. Every bee-keeper should have a copy of this booklet, and study it thoroughly. Address all orders to the American Bee Journal.

## White Sweet Clover Seed

Sweet Clover is rapidly becoming one of the most useful things that can be grown on the farm. Its value as a honey-plant is well known to bee-keepers, but it worth as a forage-plant and also as an enricher of the soil are not so widely known. However, Sweet Clover is coming to the front very fast these days. Some years ago it was considered as a weed by those who knew no better. The former attitude of the enlightened farmer today is changing to a great respect for and appreciation of Sweet Clover, both as a food for stock and as a valuable fertilizer for poor and worn-out soils.

The seed should be sown either in the fall or early in the spring. 20 to 25 pounds per acre of unhulled seed is about the right quantity to sow. We can ship promptly at the following prices for the white variety:

Postpaid, one pound for 30 cents, or 2 pounds for 50 cents.

By express f. o. b. Hamilton—5 pounds for 80c; 10 pounds for \$1.50; 25 pounds for \$3.50; 50 pounds for \$6.50; or 100 pounds for \$12.00.

We can also furnish the yellow biennial seed. This variety blooms about two weeks earlier than the white which makes it preferred by some bee-keepers. For the yellow seed add one cent per pound to the above prices on the white variety. Seed will be shipped promptly on receipt of order.

## American Bee Journal, Hamilton, Illinois.



### Make Your Hens Lay

You can double your egg yield by feeding fresh-cut, raw bone. It contains over four times as much egg-making material as grain and takes the place of bugs and worms in fowls' diet. That's why it gives more eggs—greater fertility, stronger chicks, larger fowls.

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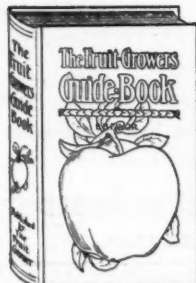
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that produce golden workers of the brightest kind. I will challenge the world on the color of my GOLDENS, and as good honey-getters. Price \$1.00 each; tested, \$2.00. Breeders \$5.00 and \$10.00.

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February and March deliveries—for Untested, \$1.50 each; April, \$1.25. Tested Queens, 50 cts. additional; Select Tested, \$1.00 extra. Breeders, prices on application.

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This book on bees is also known as the "Manual of the Apiary." It is instructive, interesting, and both practical and scientific. On the anatomy and physiology of the bee it is more complete than any other standard American bee-book. Also the part on honey-producing plants is exceptionally fine. Every bee-keeper should have it in his library. It has 544 pages, and 295 illustrations. Bound in cloth. Price, post-paid, \$1.20; or with a year's subscription to the American Bee Journal—both for \$1.90. Send all orders to the office of the American Bee Journal,

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This is G. M. Doolittle's master-piece on rearing the best of queens in perfect accord with Nature's way. It is for the amateur and the veteran in bee-keeping. The A. I. Root Co., who ought to know, say this about Doolittle's queen-rearing book:

"It is practically the only comprehensive book on queen-rearing now in print. It is looked upon by many as the foundation of modern methods of rearing queens wholesale."

Mr. Doolittle's book also gives his method of producing comb honey, and the care of same; his management of swarming, weak colonies, etc. It is a book of 126 pages, and is mailed at the following prices: Bound in cloth, \$1.00; bound in leatherette, 75 cents.

## Special Clubbing Offer

We offer a cloth-bound copy of this book with the American Bee Journal one year—both for \$1.50; or a copy of the leatherette-bound edition, with the American Bee Journal one year—both for \$1.25. The cloth-bound book given free for getting 3 new subscribers at \$1. each; or the leatherette-bound copy given for 2 new subscribers.

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**American Bee Journal, Hamilton, Illinois.**



# American Bee Journal

## Missouri-Bred Queens!

My strain of bees is the result of many years' breeding and selection. I believe they are equal to any, and surpassed by none. They are long lived, winter well, breed early, and are unexcelled honey getters. The workers are long-bodied, good-sized bees, uniformly marked with bands of orange yellow. They are good comb-builders, gentle and easy to handle, and yet protect their homes from robbers. You will make no mistake in introducing these queens into your apiary. I guarantee safe delivery at your post-office, and make a speciality of long and difficult shipments. I endeavor to keep a large supply of queens on hand. Prices as follows:

Untested—One, 60c; 6, \$3.25; 12, \$6.00. Select Untested—1, 75c; 6, \$4.25; 12, \$8.00. Tested, 1, \$1.25; 6, \$5.50; 12, \$12.00. Select Tested—1, 1.50; 6, \$8.00; 12, 15.00. Two-comb Nuclei with laying queens, \$3.00 each; 3-comb Nuclei with laying queens, \$3.50 each. Discounts on large orders.

L. E. ALTWEIN, St. Joseph, Mo.

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Tested queens in March; untested, after April 1st. About 50 first-class breeding queens ready at any date.

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That fill the supers quick  
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They have won a world-wide reputation for honey-gathering, hardiness, gentleness, etc. Untested queens, \$1.25; six, \$5; 12, \$9.00. Select untested, \$1.25; six, \$6.00; 12, \$11.00. Safe arrival and satisfaction guaranteed. Circular free.

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Annual importations of Queens has kept my stock absolutely pure.

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Bees by the Pound. Write for Circular. Apiaries inspected for brood-diseases.

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**American Bee Journal, Hamilton, Illinois.**

Dr. Peiro will continue to give the readers of the American Bee Journal free advice regarding the subject of SURGICAL and MEDICAL treatment. Many have availed themselves of this offer. Return postage is all you need to send. Address, Dr. PEIRO, 2148 Sunnyside Ave., Chicago, Ill.

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Everything in Supplies.  
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We are Western Agents for—— 1Atf  
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Next season promises a bumper crop for bee-keepers. Besides the actual cash saving there is considerable advantage in getting your season's supplies early. Orders reaching us during the next few weeks can have special attention given to particular items. You get the goods early and can put them up at your leisure at odd moments thereby saving the expense of extra help.

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# American Bee Journal

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### Caucasians

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 Select Untested....." 1.00; " 5.50; " 10.00  
 Select Tested....." 2.00; " 10.00; " 18.00

We charge 10c for clipping a queen's wings. All queens are reared in strong, vigorous colonies, and mated from populous nuclei. Instructions for introducing are printed on the reverse side of the cage cover. Virgins from good mothers, 40c. Safe arrival and satisfaction guaranteed.

## "falcon" SHIPPING-CASES "falcon"

Insure safe arrival of your comb honey, and better price, by using the best protection cases made. Get our prices of **safety cases**, and regular cases with corrugated pad, top and bottom, and corrugated follower. **Dealers everywhere. Red catalog postpaid.**

**W. T. FALCONER MFG. COMPANY, FALCONER, NEW YORK**

*Where the good bee-hives come from*

## Section Honey Extractor

### FOR THE EXTRACTION OF HONEY FROM UNFINISHED SECTIONS

All of the extractor is made of metal and well finished so as to be strong and durable. It is in fact a

**Baby Extractor.** Suited exactly to the use of the producer who has many sections which he is unable to market and which he wishes to use as bait sections the following season. Total weight of the extractor boxed is 10 pounds. It will come cheaply by express. Price for the reversible style \$4.50. Price for the non-reversible \$3.00. Section Uncapping Knife - 50c. Address all orders to

**A. H. OPFER, 6259 Patterson Ave.  
 CHICAGO, ILL.**

## We Make a Specialty of Manufacturing SECTIONS

**They are the Finest in the Land—None Better.**

Our Prices will make you smile. We want to mail OUR BEE-SUPPLY CATALOG to every bee-keeper in the land. It is FREE. Ask for it.

**H. S. DUBY, St. Anne, Ill.,** carries a full line of Our Goods, and sells them at our regular catalog prices.

**AUG. LOTZ & CO.  
 Boyd, Wis.**

Please mention Am. Bee Journal when writing.

## "Griggs Saves You Freight" TOLEDO

**FOR ME! Is Every Man's Guide Who Wishes Goods QUICK. BIG STOCK ROOT'S SUPPLIES.**

Ready to ship day order is received Wholesale prices on Chick Feed, Beef Scraps, Grit, Oyster Shells, Etc. Honey and Beeswax wanted. Catalogue Free.

**S. J. GRIGGS & CO.  
 24 N. Erie St., Toledo, Ohio**

## AQUASUN

The flavor of richest apple cider. A table delicacy that has no equal. A beverage that refreshes and invigorates. The strongest health-germs in Nature.

**Made from Honey & Water**

In any kitchen, at any hour, at a cost of 2 to 4 cents per gallon. Process and right to make it, 25c. Circular Free. 5A12t

**C. W. Dayton, Chatsworth, Calif.**  
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## Tennessee-Bred QUEENS

**40 years' experience in Queen-Rearing  
 Breed 3-band Italians Only**

I am at last up with all contracts, and can fill orders by return mail—two to five dozen daily. Prices for remainder of season—

**Untested, one for 75c; six, \$4.00; twelve, \$7.50. Tested, double these prices. The very best BREEDER, \$10.00; Select Breeder, \$5.00.**

**John M. Davis, Spring Hill, Tenn.**

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# American Bee Journal

"If goods are wanted quick, send to Pouder."

## Bee-Supplies

Standard hives with latest improvements, Danzenbaker Hives, Sections, Foundation, Extractors, Smokers; in fact, everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities can not be excelled.

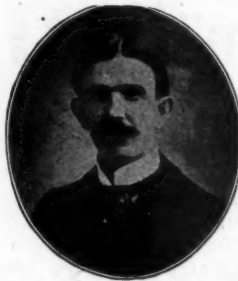
### PAPER HONEY-JARS

Sample Mailed Free

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey-producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

**WALTER S. POWDER, Indianapolis, Ind.**

850 Massachusetts Avenue.



## You Can Have the Cash

For your Comb & Extracted Honey or Beeswax, if you will send it to

**WESTERN HONEY PRODUCERS, 520 West 7th Street., Sioux City, Iowa**

Let them render your old combs into wax.

## Protection Hives

The best and lowest-priced double-walled hive on the market. This hive has 3/4 material in the outer-wall, and is not cheaply constructed of 1/2 material, as some other hives on the market. Packing or dead-air space, as you prefer. Remember, winter is approaching. Get your bees into comfortable quarters before it is here. Send for a catalog.

**A. G. WOODMAN CO., Grand Rapids, Mich.**

## Don't Worry About Robber Bees

BE SAFE AND USE THE

## Schamu Patent Roller Entrance HIVE BOTTOM

It also keeps the colony warmer, and allows breeding up in early spring. Allows feeding any time of day, even during a honey-dearth. Controls the supply of drones, and insures the best mating of Queens. Changes the amount of ventilation to suit the temperature. Closes the entrance so as to allow moving. Serves the purpose of drone-trap, feeder, bottom-board, entrance-block—and does the work infinitely better.

**Makes Bee-Keeping Pleasant** as well as **Profitable** for either amateur or professional.

Price, \$1.50 f. o. b. Liverpool, N. Y.

Ask for descriptive booklet, and send all orders to

Watch this space in the Nov. 1 issue for the Improved Roller Entrance Bottom-Board Photo

**DR. CHAS. G. SCHAMU, Liverpool, N. Y.**

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## FOR SALE

**Moore's Strain and Golden Italian Queens**, untested, \$1.00; six, \$5.00; twelve, \$10.00. Carniolan, Banat and Caucasian Queens, select, \$1.25; six, \$6.00; twelve, \$10.00. Tested, and kind, \$1.50; six, \$8.00. Choice breeders, \$3.00.

**Circular Free: W. H. RAILS, Orange, Calif.**

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## FOR SALE

Remainder of season Golden Tested Queens **90c** each; Untested, **60c** each. Strictly no disease. Safe arrival and perfect satisfaction **guaranteed**.

**R. O. COX, Box 8, GARLAND, ALA.**

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## Famous Queens!

**From Improved Stock.  
The Best That Money Can Buy**

Not inclined to swarm, and as for Honey-Gathering they have few equals.

Three-band, Golden, and Carniolans—bred in separate yards; ready March 20th. Untested, \$1.00; 6 for \$5; 12 for \$9. Tested, \$7.50; 6 for \$38; 12 for \$15.00. Breeders of either strain, \$5.00.

Nuclei, with Untested Queens—1-frame, \$2.50; six 1-frame, \$15; 2-frame, \$3.50; six 2-fr. \$20.40.

Nuclei with Tested Queens—1-frame, \$3.00; 2x 1-frame, \$17.40; 2 frame, \$4.00; six 2-frame, \$23.40.

Our Queens and Drones are all reared from the Best Select Queens, which should be so with the Drone as well as the Queens. We guarantee safe arrival and satisfaction.

**D. E. BROTHERS,**

2A9t

Jacksonville, Ark.

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## BARNES' Foot-Power Machinery



Read what J. I. PARENT, of Charlton, N. Y. says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 brood-frames, 2,000 honey-boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, **W. F. & JOHN BARNES,**  
205 Ruby St., Rockford, Ill.

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**If YOU want them  
YELLOW try the  
GENTLE strains of  
Swarthmore PEDI-  
GREED GOLDEN  
QUEENS.**

Swarthmore, Pa.

Please mention Am. Bee Journal when writing.



## EVERY BEE-KEEPER KNOWS

**The Worth of A Good Queen**

Knows the worth of a good strain of bees and also knows how worthless is a poor queen and inferior bees. Try our strain of three-banded Italians, they will not disappoint you. Tested queen, \$1.00 each; Untested, 75c; \$7.00 per doz. No disease. Send for price-list. 6Atf

**J. W. K. SHAW & CO.,**

Loreauville, Iberia Parish, La.

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## English Honey-Spoon.



This fine 90c Honey-Spoon and the American Bee Journal for one year—both for only \$1.75. Send all orders to the American Bee Journal, Hamilton, Ill.

Please mention Am. Bee Journal when writing.



# American Bee Journal

## HONEY AND BEESWAX

CHICAGO, Sept. 19.—During this month we have had very large sales of comb honey, the receipts having been taken freely, but now the stock is beginning to accumulate and the market is a little easier in tone. In fact, houses that are not in the habit of getting honey have been selling lower than quotations herein given. No. 1 to fancy comb honey sells at 17@18c per lb., with the off grades from 1@3c per lb. less. Extracted honey is in free supply, with the white selling at 8@9c per lb., with some small lots of fancy clover and linden bringing 10c per lb. The quality of honey this season is bringing in duplicate orders. Beeswax is steady at from 30@32c per lb., according to color and cleanliness.

R. A. BURNETT & CO.

CINCINNATI, Sept. 18.—The market on comb honey is quiet, and there is not very much demand, this we owe to the hot weather for this time of the year and the large fruit crop. For No. 1 white comb honey in a wholesale way we are getting 15¢ cents per pound. There is no demand for off grades of comb honey. The demand for extracted is fair, white selling at 5¢c in 60-pound cans, light amber in 60-pound cans is selling at 8c. Beeswax is in fair demand at 33¢ per 100 pounds. The above are our selling prices, not what we are paying.

C. H. W. WEBER & CO.

CINCINNATI, Sept. 18.—The demand for both extracted and comb honey is not up to expectations by far for this time of the year. Big buyers refuse to pay the prices we must ask, and we fear that it will be a case of a small business or lower prices, and

owing to the high prices we have paid it will be impossible for us to lower our price. We are selling strictly fancy comb honey at 14@15½c a lb., according to the quantity and quality purchased; amber comb honey is not wanted at any price. What little is sold of fancy extracted honey in 60-pound cans we are getting 8@10c a lb., while amber honey in barrels we are selling at 5½@7c, according to the grade and quantity purchased. There is plenty of beeswax, and the prices are much easier than they have been for some time. We are paying 28c a lb. delivered here for choice, bright yellow beeswax.

THE FRED W. MUTH CO.

INDIANAPOLIS, Sept. 18.—Extracted honey of finest quality is selling at 10½@12c in 5-gallon cans, according to quantity at one shipment. No. 1 and fancy white comb is selling at 16@17c. Beeswax is in good demand, and producers are being paid 30c per pound.

WALTER S. POWDER.

KANSAS CITY, MO., Sept. 18.—The receipts of both comb and extracted honey are still light. The demand for comb honey is good. We quote: No. 1 white comb, 24 section cases, \$3.50; No. 2, \$3.25; No. 1 amber, \$3.25; No. 2, \$3.00. Extracted, white, per lb., 8@8½c; amber per lb., 6@8c. Beeswax, per lb., 25@28c.

C. C. CLEMONS PRODUCE CO.

NEW YORK, Sept. 12.—Comb honey is now arriving right along with a fair demand for all grades at unchanged prices. The season for buckwheat being late this year, there is none on the market yet to speak of. From the reports we are receiving from producers

there will be a rather light crop; however, the demand for buckwheat comb honey is being limited, we do not think that higher prices will rule than from 10@12c per lb., according to quality. Extracted is in fair demand for all grades at unchanged prices.

HILDRETH & SEGELKEN.

SAN FRANCISCO, Sept. 18.—The demand for comb honey is still beyond the supply, and fancy and No. 1 still very limited, and what arrives is soon taken up. Extracted honey is somewhat easier, and several carloads have been upon the market, and the water white and lighter grades have found ready buyers. Fancy white comb, 16@17c; dark to amber, 13½@15c per lb.; river comb, 11@12½c per lb. Water-white extracted, 8@8½c; light amber, 7½@8c; amber, 6@7½c; lower grades, 5@6½c per lb. Beeswax, 27½@30c for nice, yellow wax, 23@26c for the darker grades.

JOHN C. FROHLIGER.

BOSTON, Sept. 16.—Fancy white comb honey, 16@17 per lb.; No. 1, 15@16c. Fancy white extracted, 10@11c; light amber, 9@10c; amber, 8@9c. Beeswax, 30c. BLAKE-LEE CO.

### FOR PURE

### CARNIOLIAN ITALIAN and BANAT Queens



for fall delivery send your orders to me or write for circulars.

#### PRICE

75c each; \$8.00 per dozen.

Grant Anderson, San Benito, Texas.

## Special Delivery

During this month we shall double our usual efforts in points of delivery and service. Early indications not having been most favorable, it is possible many bee-keepers will not have laid in a sufficient stock of supplies, such as sections and foundation, for the clover and basswood crop this month. We are prepared to make up for this oversight by having a large stock of both sections and foundation on hand for instant delivery. We carry nothing but the Root make, which insures the best quality of everything. We sell at factory prices, thereby insuring a uniform rate to every one. The saving on transportation charges from Cincinnati to points south of us will mean quite an item to bee-keepers in this territory. We are so located that we can make immediate shipment of any order the day it is received.

### HONEY AND BEESWAX

If you haven't made arrangements for the disposition of your honey and wax for this season, consult us. We buy both in large quantities, and can assure you of fair and courteous treatment, and a good price for your crop.

### Shipping-Cases.

To sell your crop to the best advantage it must be well put up in attractive style. We have shipping-cases that answer every requirement of looks and utility. Small producers who sell their crops locally will be interested in the cartons in which comb honey is put up to sell to the fancy customers at top-notch prices. We have honey-cans, too, in cases for those who produce extracted honey. In fact, there isn't anything we don't have that the bee-keeper needs, either to produce his crop or help to sell it.

# C. H. W. WEBER & CO.

2146 Central Avenue.

CINCINNATI,

OHIO.

# **25 TWENTY-FIVE PRIZES 25**

**For the best pictures of bees, bee-appliances and bee-scenes  
sent in before November 1, 1912**

<b>First Prize, Cash</b>	.	.	<b>\$25.00</b>
<b>Second</b>	.	.	<b>10.00</b>
<b>Third</b>	.	.	<b>5.00</b>
<b>Fourth</b>	.	.	<b>5.00</b>
<b>Fifth</b>	.	.	<b>5.00</b>

**6th to 25th each one copy of "Langstroth on the Honey-Bee," or in case you have this we will substitute any other standard work on bees**

**Restrictions:**—All pictures to be clear and of good print, and accompanied by at least a short description. We reserve the right to use any and all pictures sent in. No picture will be accepted which has already been used in publication.

Any size picture will do. Send in your pictures now, or take them now and send them in before the date mentioned above.

**For every picture we use, even if it does NOT come in the prizes, we will give a premium of some sort**

**It is our aim to increase the value the American Bee Journal, and we must have good pictures and plenty of them. Remember, our magazine is a National bee-paper**

## **THE AMERICAN BEE JOURNAL**

**Hamilton, Hancock Co., Illinois**



